



Fig. 1

Monkey IPM 150

001 ATTTCCTTCCGACGGGGTTAAAGTCTGTCACAGAAATCCAGATTATTTAGCCAGTCTTCAAGCTTAATTAAGATTGAGTGTGTCAGGAG
I P F P N G V K V C P Q E S M K Q I L A S L Q A Y Y R L R V C Q E
101 CAGTATGGAAGCATTCGAACTTCTGATCCATTCGACATGCGGAAATATCAGACTGCGTCACTTCCACAGAGACTTCTGCTCTT
A V W E A Y R I F L D R I P D T G E Y Q D W V S F C Q Q E T F C L F
201 TGACATCGGAGAAATTCAGCAATTCGACAGCACTGCAATCTTCTCAGAGAGATTAACAGAGAGTTCCCTGAGAGAAAGATGAAATCT
D I G Q N F S N S Q E H L D L L Q Q R I K Q R S F P E R K D E V S
301 ACAGAGAGACATTCGAGAGCTGATGAAACATGTGTTCACAGATGTGCGAGGCTTCACATTCGCGCCCTTCCCTGCACTCTCTGATGACACCC
T E K T L G E P S E T I V V S T D V A S V S L G P F P V T P D D T
401 TCTCAATGAATTCGATTAATGCACTCAAGACACAGATGCTTACACAGAAAGAGAACAGACTGCTGTGTCTGAGAGACAGAGGCTGAGCT
L L N E I L D N A L N D T K M P T T E R E T E L A V S E E Q R V E L
501 CAGCAATCTCTGATTAACAGAGGTTCAAGGAGAGCTCCGCTGACTTCAGTCA
S I S L I N Q R F K A E L A D S Q S

Fig. 2

Human IPM 150

001 TAAACCAAGAAGGTTATCCTCAATCATCTGGTATCAATATATAATTATTTTCCTTTNIGITACTTTTAAATGAGATTGAGGTTGTTCTGTGATTGTTA
101 TCAGAATTACCATGCACAAAAGCCAGAAATGTATTTGGAAACTAGAAGAGCTATTTTGTGTTTGGATTTCCTCAAGTTCAAGGAACATAAGATATCT
M Y L E T R R A I F V F W I F L Q V Q G T K D I

201 CCATTAACATATACCATTTCTGAACTAAAGACATAGACAATCCCCCAAGAAATGAAACAACCTGAAAGTACTGAAAAATGTACAAAATGTCAACTATGAG
S I N I Y H S E T K D I D N P P R N E T T E S T E K M Y K M S T M R

301 ACGAATATTGGAATTTGGCAAGCATCGAACAAAAGATCCGCATTTTCCCAACGGGGGTAAAGTCTGTCCACAGGAATCCATGAAACAGATTTTAGAC
R I F D L A K H R T K R S A F F P T G V K V C P Q E S M K Q I L D

401 AGTCTTCAAGCTTATTATAGATTGAGAGTGTGTGAGGAGCAGTATGGGAAGCATATCGGATCTTTCTGGATCGCATCCCTGACACAGGGGAATATCAGG
S L Q A Y Y R L R V C Q E A V W E A Y R I F L D R I P D T G E Y Q

501 ACTGGGTGAGCATCTGCCAGCAGGAGACCTTCTGCCTCTTTGACATTTGAAAAAACTTCAGCAATTCAGGAGCAGCTGGATCTTCTCCAGCAGAGAAT
D W V S I C Q Q E T F C L F D I G K N F S N S Q E H L D L L Q Q R I

601 AAAACAGAGAAGTTTCCTGACAGAAAAGATGAAATATCTGACAGAGAAGCATTTGGGAGAGCCTGGTGAACCATTTGTCAATTTCAACAGATTTGCCAAC
K Q R S F P D R K D E I S A E K T L G E P G E T I V I S T D V A N

701 GTCTCACTTGGGCTTTCCCTCTCACTCTGATGACACCTCTCAATGAAATCTCGATAATACACTCAACGACACCAAGATCCCTACAACAGAAAGAG
V S L G P F P L T P D F L L N E I L D N T L N D T K M P T T E R

801 AAACAGAATTCGCTGTGTGGAGGAGCAGAGGGTGGAGCTCAGCGTCTCTCTGGTAAACAGAAAGTTCAGGAGCAGCTCGCTGACTCCAGTCCCCATA
E T E F A V L E E Q R V E L S V S L V N Q K F K A E L A D S Q S P Y

901 TTACAGGAGCTAGCAGGAAAGTCCCAACTTCAGATGCAAAAGATATTTAAGAACTTCCAGGATTCAAAAAATCCATGTGTAGGATTAGACCAAG
Y Q E L A G K S Q L Q M Q K I F K K L P G F K K I H V L G F R P K

1001 AAAGAAAAGATGGCTCAAGCTCCACAGAGATGCAACTTACGGCCATCTTTAAGAGACACAGTGCAGAAAGCAAAAGCCCTGCAAGTGACCTCTGTCTT
K E K D G S S S T E M Q L T A I F K R H S A E A K S P A S D L L S

1101 TTGATTCACAAATAATGAAAGTGGAGAGTCTATCATGGAACCATGGAGGAGGACAAGCAACAGAAATCTATCTCACAGCTACAGACCTCAAAAGGCT
F D S N K I E S E E V Y H G T M E E D K Q P E I Y L T A T D L K R L

1201 GATCAGCAAGCACTAGAGGAAGAACAATCTTTGGATGTGGGACAATTCAGTTCACTGATGAAATGCTGGATCACTGCCAGCTTTGGTCTGACACC
I S K A L E E E Q S L D V G T I Q F T D E I A G S L P A F G P D T

1301 CAATCAGAGCTGCCACATCTTTGTCTGTATAACAGAGGATGCTACTTTGAGTCCAGAACTTCCTCTGTGAACCCAGCTTGAGACAGTGGACGGAG
Q S E L P T S F A V I T E D A T L S P E L P P V E P Q L E T V D G

1401 CAGAGCATGGTCTACCTGACACTTCTTGGTCTCCACCTGCTATGGCCTCTACCTCCCTGTGAGAAGCTCCACCTTTCTTTATGGCATCAAGCATCTTCTC
A E H G L P D T S W S P P A M A S T S L S E A P P F F M A S S I F S

1501 TCTGACTGATCAAGGCACACAGATACATGGCCACTGACCAAGCAATGCTAGTACCAGGGCTCACCATCCCAACAGTGATTATTTGCAATCAGCCAA
L T D Q G T T D T M A T D Q T M L V P G L T I P T S D Y S A I S Q

1601 CTGGCTCTGGGAATTTCACTCCACCTGCATCTTTCAGATGACAGCCGATCAAGTGCAGGTGGCGAAGATATGGTCAGACCTAGATGAATGGATCTGT
L A L G I S H P P A S S D C S R S A G G E D M V R H L D E M D L

1701 CTGACACTCTGCCCATCTGAGGTACAGAGCTCAGCGAATATGTTTCTGTCCAGATCATTTCTTGGAGGATACCACTCTGTCTCAGCTTTACAGTA
S D T P A P S E V P E L S E Y V S V P D H F L E D T T P V S A L Q Y

1801 TATCACCACTAGTTCTATGACCATTGCCCAAGGGCGAGAGCTGGTAGTGTCTTCAGTCTCGGTGTGTCTAACATGGCCTTCTCCAACGACCTGTTC
I T T S S M T I A P K G R E L V V F F S L R V A N M A F S N D L F

1901 AACAAAGAGCTCTCTGGAGTACCGAGCTCTGGAGCAACAATTCACACAGCTGCTGGTTCCATATCTACGATCCAATCTTACAGGATTAAAGCAACTTGAAA
N K S S L E Y R A L E Q Q F T Q L L V P Y L R S N L T G F K Q L E

2001 TACTTAACTTCAGAAACGGGAGTGTGATTTGTAATAGCAAAATGAAGTTTGCTAAGTCTGTGCGGTATAACCTCACCAAGGCTGTGACGGGGTCTTGGA
I L N F R N G S V I V N S K M K F T A K S V P Y N L T K A V H G V L E

2101 GGATTTTCTGTCTGCTGCAGCCCAACAACCTCCATCTGGAATAGACAGCTACTCTCTCAACATTGAACCAAGCTGATCAAGCAGATCCCTGCAAGTTCTCTG
D F R S A A A Q Q L H L E I D S Y S L N I E P A D Q A D P C K F L

2201 GCCTGCGGCGAATTTGCCAATGTGTAAGAAGCAAGCAAGTGTGAGGAGCGGAGTGTGCTGCAAAACAGGATATGACAGCCAGGGAGCTGGACGGTC
A C G E F A Q C V K N E R T E E A E C R C K P G Y D S Q G S L D G

2301 TGAACCAAGGCTCTGTGGCTGGCAAAAAGAAATGCGAGGTCTCCAGGAAAGGGAGCTCCATGCGGTTCAGATCACTCTGAAAATCAAGCATACAA
L E P G L C G L A Q R N A R S R E R E L H A V P D H S E N Q A Y K

2401 AACTAGTGTAAAGTTCCAAAATCAACAAAATAACAGGTAATCAGTAAAGAAATTTCTGAATTACTGACCGTAGAATATGAAGAATTTAACCATCAAG
T S V K S S K I N K I T R STOP

2501 ATTGGAAGGAATTAATACTGAAAAATGTACAATTATCACTTAGGCTATCTCAAGAGAGATGATTGCCTTCTCAAGGAAAAATGGAGACAGGCATATTC
2601 ATGGGTCACTCAAAATCCAGACATACAGTCAACACTGAGAATCAGCACACCATATTTCAAAATATAGAAGATCATGTACTTGGCAACCCAGTAAATTCG
2701 AAAAAAAGACACTTACTTATTATTAACCCCAATGCAATCAGCGAAACATATTTTACTATCTTTGGATGATAGTCAAAATGATCATAGCCAGGTT
2801 TGCTTCCACCTTCCCTGAAAAATTTACTACAGATCATTTGCAACAAGCATAGCTTACTTATTGTTTGGAGTGAACAATTTATTTGGGAAGCAAACTCT
2901 TTATATGCTAGAAAGTACATTTAAAGATGACTACTTACCGAGGAGATGCAGGTCTCTTAAACGCATGAATGTATGTAGTGTAGGCACTGTAGTGA
3001 GTGTATATATGCTCCACTACGCTGTATAACACAAACCTCAGTATTCAAGTATTATAGGCACACTAGTTTATACGCAACTACTGCTTACATAGTAGACT
3101 GTTTGTGCGCAATATCTTGAATTGTTCTTTAAAGAAACTGAGGTTTCAGATACACATACCATGGAAAAATCTTACTTTCTGTGTTACTACACAAAGC
3201 TATTTTAAAGAAGATGCTATGTTGGGAGAAGGGCGAAGTTGTACTATATGACATAATCAAT

Fig. 3

[illegible]

Fig 4A

3001 CCTATCTCCAGTCAAATCTCACGGGGTTCCAGAACTTAGAAATCCTCAACTTCAGAAATGGCAGCATTTGTGGTGAACAGTGAATGAAGTTTGCCAATTC
 P Y L Q S N L T G F Q N L E I L N F R N G S I V V N S R M K F A N S
 3101 TGTCCTCTCTAAGTCAACAATGGGTGTACATGATTTCTGGAAGACTTTTGTACCACTGCCTACAATACCATGAAGTTGGCTATTGATAAATACTCTCTT
 V P P N V N N A V Y M I L E D F C T T A Y N T M N L A I D K Y S L
 3201 GATGTGGAATCAGGTGATGAAGCAACCCCTTGCAAGTTTCAGGCCTGTAATGAATTTTCAGAGTGTCTGGTCAACCCCTGGAGTGGAGAAGCAAAGTGA
 D V E S G D E A N P C K F Q A C N E F S E C L V N P W S G E A K C
 3301 GATGCTTCCCTGGATACCTGAGTGTGGAAGAACGGCCCTGTCAGAGTCTCTGTGACCTACAGCCTGACTTCTGCTTGAATGATGGAAGTGTGACATTAT
 R C F P G Y L S V E E R P C Q S L C D L Q P D F C L N D G K C D I M
 3401 GCCTGGGCACGGGGCCATTGTAGGTGCCGGGTGGGTGAGAAGTGGTGGTACCGAGGCAAGCACTGTGAGGAATTTGTGTCTGAGCCCGTGATCATAGGC
 P G H G A I C R C R V G E N W W Y R G K H C E E F V S E P V I I G
 3501 ATCACTATTGCCTCCGTGGTGGGACTTCTTGTCTATCTTCTTCTGCTATCATCTACTTCTTCATCAGGACTCTTCAAGCACACCATGACAGGAGTGAAGAG
 I T I A S V V G L L V I F S A I I Y F F I R T L Q A H H D R S E R
 3601 AGAGTCCCTTCAGTGGCTCCAGCAGGCAGCCTGACAGCCTCTCATCTATTGAGAATGCTGTGAAGTACAACCCCGTGTATGAAAGTCAAGGGCTGGATG
 E S P F S G S S R Q P D S L S S I E N A V K Y N P V Y E S H R A G C
 3701 TGAGAAGTATGAGGGACCTATCCTCAGCATCCCTTCTACAGCTCTGCTAGCGGAGACGTGATTGGTGGGCTGAGCAGAGAAGAAATCAGACAGATGTAT
 E K Y E G P Y P Q H P F Y S S A S G D V I G G L S R E E I R Q M Y
 3801 GAGAGCAGTGAAGCTTTCCAGAGAGGAAATTAAGAGAGAATGAGAGTTTGGAACTGTATGCCAATGATCCTGAGTTTGCAGCTTTTGTGAGAGAGCAAC
 E S S E L S R E E I Q E R M R V L E L Y A N D P E F A A F V R E Q
 3901 AAGTGAAGAGGTTTAAACCAAACTCCTGTTCTGAAACTGATTAGAAGCCTGGAGAAGATGGAGATTACTTGTACTTATGTCATATAATTAACCTGGAT
 Q V E E V STOP
 4001 TTAAACACTGTTGGAAGAAGAGNTTCTATGAAAAAATTAATATAGGGCACACTGTTTTTTTTCAGCTTAAGNTTTCAGAATGTAGTNAGAGATGTW
 4101 MCATTTTTTATTTCTATAAGACTGAATGCTGTGTTTAAATAATTGAAAACCTACGTTAAAAA

Fig. 4B

66207-5670E460

Rat PG10.2	S	I	L	F	P	N	G	V	R	I	C	P	S	D	T	V	A	E	A	V
Human 200	X	A	L	F	P	N	G	V	L	I	X	P	X	E	V					
Monkey 200	X	I	L	F	P	N	G	V	L	I	X	P	D	E	V	X	K	E	I	
Pig 200	X	V	L	F	P	N	G	V	K	I										
Human 150	S	A	F	F	P	T	G	V	K	V	C	P	Q	E	S	M	K	Q	I	L
Monkey 150	X	I	F	F	P	T	G	V	K	V	X	P	Q	E	S	M	K	Q		
Pig 150	X	V	F	F	P	T	G	V	K	V	X	P	Q	E	S	M	K	Q	I	L

Fig. 5

1 TGGATTTTTC TCCAA CA AGGAATCAAA GTATGTCAAG AAGT GTG GGAAGCATAT
 61 CGTATCTTTC TGGAC CAAT TCCTGACACA GAGGAATATC AAGT GGGT CAGCCTCTGC
 121 CAGAAAGAAA CTTTCTGCCT CTTTGACATT GGGAAAACT CCAGCAACTC CCAGGAGCAC
 181 CTAGATCTTC TTCAGCAGAG AATAAACAG AGAAGCTTCC CTGGGAGGAA AGATGWGACA
 241 GCCTCCATGG AGACACTGGA AGCACCTACT GRAGCCCCTG TGGTACCCAC AGATGTTTCC
 301 AGGATGTCCC TGGGGCCMTT CCCACTTCTC TCTGATGACA CAGACCTCAA GGAGATTCTC
 361 AGTGTACCC TCAAGGACAT TCAAAGCCC ACAACAGAAA GTAWAACAGA ACCTATTCA
 421 GTGTCTGAAT TCTCATCAGA GGAGAAGGTG GARTTCAGCA TCTCTCTGCC AAACCACAGG
 481 TTCAAGGCAG AGCTCACCAA CTCTGGGTCA CCATACTACC AGGAACTGGT GGGACAGTCC
 541 CAACTGCAGT TGCAAAAGAT ATTTAAGAAA CTTCAGGAT TCGGAGAAAT CCGTGTATTA
 601 GGATTTAGAC CAAAGAAAGA AGAAGATGGT TCAAGCTCCA CAGAAATACA GCTTATGGCC
 661 ATCTTTAAGA GGGACCATGC AGAAGCAAAA AGCCCTGATA GTCATCTACT GTCTCTTGAT
 721 TCCAACAAAA TTGAAAGTGA AAGAATCCAT CATGGAGTCA TAGAAGACAA ACAACCAGAA
 781 ACCTACCTCA CAGCTACAGA CCTCAAAAAA CTCATCATAC AACTACTAGA TGGAGACCTG
 841 TCCTTGGTAG AAGGGAAAAT TCCATTCCGT GATGAAGTTA CTGGGACACT CTTCAGACCT
 901 GTCAGTGAAC CAGATCTGCC CAAGCCCCTT GCTGATGTCA CAGAGGATGC CACTTTGAGT
 961 CCAGAACTTC CTTTCGTTGA GCCTAGGCTT GAGGCAGTGG ACAGAGAAGG ATCTGAGCTG
 1021 CCTGGAATGT CCTCCAAAGA CAGTTCTTGG TCTCCACCTG TATCAGCCTC AATTTCCCGA
 1081 TCAGAAAATC TACCTTCGTT TACACCTAGC ATCTTCTCTC TAGATGCTCA AAGCCCCCT
 1141 CCCTTGATGA CCACTGGCCC AACAGCACTC ATCCCCAAGC CCACTCTCCC CACTATCGAT
 1201 TATTCTACCA TCCGCCAATT GCCTCTGGAA TCGTCACATT GGCCTGCATC CTCCAGTGAC
 1261 AGAGAGCTGA TCACAAGCAG CCAATGACACA ATCCGAGACC TAGATGGCAT GGATGTGTCT
 1321 GACACGCCAG CTTGTGTCAGA AATATCAGAA CTGAGTGGAT ACGATTCTGC CTCGGGTCAG
 1381 TTCTTGGAGA TGACCACACC CATCCCAACA GTACGGTTCA TCACCACCAG CTCCGAGACC
 1441 ATTGCCACCA AGGGCCAGGA GCTAGTGGTA TTCTTCAGCC TGCCTGTTGC TAACATGCCG
 1501 TTCTCCTATG ACCTGTTCAA CAAGAGTTCT CTGGAGTATC AAGCCCTGGA ACAACGATTC
 1561 ACAGACCTGC TGGTTCCTA TCTACGATCG AATCTTACGG GATTAAAGCA ACTGGAAATA
 1621 CTCAGCTTCA GAAACGGAAG TGTGATCGTG AACAGCAAAG TCGGTTTGC AAAGGCGGTA
 1681 CCCTACAACC TCACCAGGC CGTGCGCGGG GTCTTGGAGG ATCTTCGGTC CACCGCAGCT
 1741 CAAGGGCTCA ATCTGGAAAT CGAAAGCTAC TCCCTCGACA TTGAACCAGC TGATCAGGCG
 1801 GATCCCTGCA AACTCCTAGA CTGTGGCAAA TTTGCCAGT GTGTAAAGAA TGAGTGGACA
 1861 GAGGAAGCAG AGTGTCTGCTG CAGACAGGGA CATGAGAGCC ACGGGACCCT GGACTACCAG
 1921 ACCCTGAACC TCTGTCCCCC TGGAAAGACT TGTGTGGCCG GCCGAGAACA AGCAACTCCA
 1981 TGCAGGCCAC CAGATCACTC TACAAACCAA GCTCAGGAAC CTGGTGTAA AAAGCTACGT
 2041 CAGCAAAATA AGGTAGTCAA GAAAAGAAAT TCTAACTAT CAGCTATAGG ATTTGAAGAA
 2101 TTTGAARACC AGGACTGGGA GGGAAATTAA AAGCTGGAAT CATATGCATT ATGTTGCAAA
 2161 CTCTGTTGAA AGGAACTTT ATTTCTTAAA GAAAGGTGTA TCTGTTCTGT TAACTTCTGA
 2221 AAAACAGAGG GAGAGATTCA GTGGTCATTG GAATACAGGC ATGTAATCAA CTTTGAGACT
 2281 CAGCATGCTT GAACAAGAGC ACAGGCGTGT ATTTGATGAC AGTTAAGCCT GGTGCGGCG
 2341 GGGGGCACAT ATTTTATGTC AAAACTCAA GCAATCATTG GAACACATT GACTATTTT
 2401 GGACAGTACT CAAGTAGCAA AGATAAGGT AGCTTTTTT TTTCTTTAAA TTATTACATA
 2461 AARCTTATTT CAAATAAATA CAATTGTT AGTGGGTTGT ACAATATTGA GGATCTGATT
 2521 CTTTTATATG TTAGAATATA CAGTTAAAG ATTATCATTT GGGCCAGAGA GATAGCTAAG
 2581 TGGTTAAGAG TATATACTGC TCTCCAGAA GCCCTGGGT TACCGTCCCA ACAGCCACAT
 2641 TGACTGGCTC ACACACACCT GTAAGTCAGG CTCCAGAGAA CAAACACCCT CCTCTGGCCT
 2701 TTGTACCCAC GTGCACATAA CCGCAAACAG ACACACCCAC GCTATTTTT TAGAAGTCAT
 2761 TGATTTTTTT AATTAGGGGT GGAATAACAG GCTGGAGAGA TGACTCCGTG GTTAAGAACA
 2821 GTTGTGTGTT TTCCAGAGGA CCCAGGTTCA GTTCCAGAA CCCACAAGGC NAGTCTCCCA
 2881 ACTATTCATA ATTCTAGTTC AAGTGGATCC AGCACCTCT TCTAACTGAT ACTGCCAGTA
 2941 CCAGGCAGCC ATGTGGTGCA TATGCATTG GGCAGGTAAA AACTCAGAC ACGCAAAAAA
 3001 TTTTAAATCT AAATTTTGAA AATATTTAG TTTAAGGAT GATCACTGTG TGAGGGTCAG
 3061 GTCTCTTATG TATGAATGA GTACCAAGAA CTGTGATGAG TATATGATG CTCCATTCTA
 3121 TAGTCTCTC TCTCTCTC TCTCTCTC TCTCTCTC TCTCTCTC TCTGGAATTC
 3181 CGGAATTCG GAATTCGGGA ATTCCG

Figure 6A (SEQ ID NO:50)
 (Mouse IPM150 cDNA)

1 WIFLQVQGIK VCQEVVWEAY RIFLDRIPTD EEYQGWSLC QKETFCFLDI GKNSSNSQEH
 61 LDLLQQRIKQ RSFPGRKDXT ASMETLEAPT XAPVVPTDVS RMSLGPFPLP SDDTDLKEIL
 121 SVTLKDIQKP TTESXTEPIH VSEFSSEEV EFSISLPNHR FKAELTNSGS PYYQELVGQS
 181 QLQLQKIFKK LPGAEGEIRVL GFRPKKEEDG SSSTEIQLMA IFKRDHAEAK SPDSHLLSLD
 241 SNKIESERIH HGVIEDKQPE TYLTATDLKK LIIQLLDGDL SLVEGKIPFG DEVTGTLFRP
 301 VTEPDLPKPL ADVTEDATLS PELPFVEPRL EAVDREGSEL PGMSSKDSSW SPPVSASISR
 361 SENLPSFTPS IFSLDAQSPP PLMTTGPTAL IPKPTLPTID YSTIRQLPLE SSHWPASSSD
 421 RELITSSHDT IRDLGMDVS DTPALSEISE LSGYDSASGQ FLEMTTPIPT VRFITTSSET
 481 IATKGQELVV FFSLRVANMP FSYDLFNKSS LEYQALEQRF TDLLVPYLRN NLTGFKQLEI
 541 LSFRNGSVIV NSKVRFAKAV PYNLTQAVRG VLEDLRSTAA QGLNLEIESY SLDIEPADQA
 601 DPCKLLDCGK FAQCVKNEWT EEAECRCROG HESHGTLDYQ TLNLCPPGKT CVAGREQATP
 661 CRPPDHSTNQ AQEPGVKKLR QQNKVVKKRN SKLSAIGFEE FEXQDWEGN

Figure 6B (SEQ ID NO: 51)

Mouse IPM150 protein

1 CCGTGGCAA TGTGAAG TATTTTAAAG CCCGAGTGTG CCAGG C ATCTGGGAAG
 61 CCTTCAGGAA TTTGGGAT CGACTTCTTG GCGTGATGA ATATC C TGGATGAATT
 121 TATGTGAGGA TGGAGTCACA AGTGTATTTG AAATGGGCGC CCATTTTAGT CAGTCTGTGG
 181 AACATAGAAA CCTAATCATG AAGAACTGG CTTACACAAG GGAAGCTGAG AGCAGTCCT
 241 GCAAGGATCA GTCCTGTGGG CTTGAGTTGT CTTTCCAGT TCCTATTGGT GAGACCTCAA
 301 CACTGACAGG TGCTGTCTCC AGTGCTTCTC ATCCAGGGTT GGCTTCGGAG AGCAGCGCAG
 361 CGTCACCGCA GGAGAGTATC AGCAATGAAA TTGAGAATGT GACAGAGGAG CCCACACAAC
 421 CAGCTGCTGA ACAGATTGCG GAATTCAGCA TCCAACCTCT GGGGAAGCGA TACAGTGAAG
 481 AACTGCGGGA TCCCTCCAGC GCCCTCTACC GGCTCCTCGT GGAAGAGTTT ATTTAGAGG
 541 TTGAAAAAGC ATTCACAGGG TTACCTGGCT ACAAGGGCAT CCGTGTCTG GAATTCAGGG
 601 CCCCAGGAGG AAATGACAGT GGGATAGATG TTCACTATGC AGTTACCTTC AATGGCGAAG
 661 CCATCAGCAA TACCACCTGG GACCTCATAG GCCTTCACTC CAACAAGGTA GAAAACCATG
 721 GCCTTGATGA GATGGATGAT AAACCCACTG CTGTCTATAC AATTAGTAAC TTCAGAGATT
 781 ATATCGCTGA GACGCTGCAC CAGAACCTTT TGATGGGAAA TTCCTCTTTG AATCCAGATC
 841 CCAAGCCTCT CCAGCTCATC AATGTGAGAG GAGTTTGTCT CCCCCAACA GAAGACATAG
 901 TTTGGAACAC CCAAAGTTCA AGTCTTCAGG TGACAACATC CTCTATTTTN GTGCTTCAGC
 961 CTGACCTGCC TGTGGCTCCT GAGGGAAGGA CTCTGGATC GTTCATATTA GAAGATGGGT
 1021 TAGCCAGCAG TGAAGAATTA GAAGATACTT CTATTGATGG ATTGCCTTCA AGCCCATTA
 1081 TTCAACCTGT GCCAAAAGAA ACAGTACCAC CTATGGGAAGA CTCTGACACG GCTCTCTTGT
 1141 CCACACCACA TCTGACCTCT TCTGCTATAG AAGACCTTAC TAAAGACATA GGGACACCTT
 1201 CTGGCTTGA GTCTTTGGCT TCAAACATCT CAGACCAGTT GGAAGTGATC CCATGGTTTC
 1261 CAGACACCTC TGTGGAAAAA GACTTCATTT TTGAAAGTGG CTTGGGTTCT GGGTCTGGGA
 1321 AAGATGTAGA TGTGATTGAT TGGCCATGGA GTGAGACTTC ATTAGAGAAG ACCACTAAAC
 1381 CACTGTCAAA GTCATGGTCT GAAGAACAGG ATGCACTATT ACCAAGTGAAG GGTAGAGAAA
 1441 AATTACATAT AGATGGCAGA GTAGATTCCA CAGAACAAT TATTGAATCA TCAGAACATA
 1501 GATATGGAGA TAGGCCCATTA CATTATATAG AGGAAGANTC CCATGTTAGA TCTACTATAC
 1561 CCATCTTTGT AGAGTCCGCA ACTCCACCTA CATCTCCAAT CTTTCAAAA CACACTTCAG
 1621 ATGTACCAGA CATTGATTCT TACTCACTTA CCAAACCACT CTTCTTACCG GTAACATAG
 1681 CAATCCCTGC TTCCACTAAG AAAACAGATG AGGTACTCAA GGAAGATATG GTACATACAG
 1741 AATCATCCAG TCACAAAGAA CTTGACAGTG AGGTTCCAGT GTCAAGGCCA GATATGCAGC
 1801 CTGTGTGGAC CATGTTGCCA GAATCAGATA CAGTTTGGAC AAGAAGTCTT TCCTTAGGGA
 1861 AATTGTCCAG AGACACATTG GCAAGTACAC CAGAGAGCAC TGACAGACTC TGGTTGAAAG
 1921 CTTCCATGAC ACAGTCCACT GAATTGCCTT CAACCACTCA CTTCCACCTC CTAGAGGAGG
 1981 AAGTAATAAT GCGGTCCAG GATATTTTCT TAGAAGTAGA TCAGGTAGGC ACAGATTATT
 2041 ATCAGTCCGA GCTAACTGAA GAACAACATG GCAAGGCTGA CAGCTATGTG GAAATGTCTA
 2101 CCAGTGTTC CTACACAGAG ATGCCATTG TGGCTCTGCC CACAAAGGA GGTGTTCTGA
 2161 GTCACACCCA GACTGCAGGA GACTGGTGG TTTTCTTCAG CCTCCGCGTG ACAACATGT
 2221 TGTTTTGAGA AGACTTGTTT AACAAAACT CTTTGAATA TAAAGCCCTG GAACAAAGAT
 2281 TCTTAGAAT GCTGGCTCCC TATCTCCAGT CAAATCTGTC AGGGTCCAG AACCTAGAAA
 2341 TCCTGAGTTT CAGAAACGGC AGCATTGTGG TGAACAGCCG AGTGAGGTTT CCGGAGTCTG
 2401 CCCCTCCTAA TGCAACAAG GCCATGTATA GGATTCTGGA AGACTTTTGT ACCACTGCCT
 2461 ACCAAACCAT GAACCTGGAT ATCGATAAGT ACTCCCTGGA CGTGGAAATCA GGTGATGAGG
 2521 CCAACCTTG CAAGTTTCTG GCCTGTAATG AATTTTCTGA GTGTTTGGTA AATCCATGGA
 2581 GTGGAGAAGC AAAGTGCAAA TGCTACCCTG GGTACCTGAG TGTGGATGAA CTGCCCTGTC
 2641 AAAGTCTCTG TGATCTACAG CTTGACTTCT GCTTGAACGA TGGAAAGTGT GACATTATGC
 2701 CTGGGCATGG AGCCATTGT AGATGCCGGG TTGGTTCAA CTGGTGGTAT CGAGGCCAAC
 2761 ACTGTAGGA GTTTGTGCT GAGCCCTTTG TCATAGGCAT CACTATAGCC TCTGTGGTA
 2821 GCTTCTCTCT GTTGTCTCT GCTGTCGTCT TCTTCTTGT GAAGATGCTT CAAGCTCAGA
 2881 ATGTCAGGAG AGAAAGGCAG AGGCCACCA GCTCCAGCAG GCACCCTGAC AGTCTGTCTA
 2941 CTGTTGAGAA TGCTATGAAG TATAACCTTG CATATGAGAG CCACTTGGCT GGATGTGAAC
 3001 TGTATGAGAA ATCCTATAGC CAACATCCCT TCTATAGCTC TGCTAGTGAA GAGGTGATTG
 3061 GTGGTCTGAG CAGAGAAGAA ATCAGACAGA TGTATGAAAG TAGCGACCTT TCCAAGAGG
 3121 AAATCAAGA GAGAATGAGG ATTTTGAAC TCTATGCTAA TGATCCTGAG TTTGCAGCTT
 3181 TTGTGAGAGA GCATCAAATG GAGGAGCTTT AACCTAAATG CCTGATTCTT GACACCAATC
 3241 AGAAGCTTGG AGAAGATGGA GAAGGCTTGT TCTCTCTGCT GTTTAACTAA TCCAGAAGAA
 3301 GAGTTTGTAT TGAAGAATAA ATAAGGAAAC ATGGGACGCA CTTCTCATT CCAACTGCA
 3361 GCTTAATTTT TTGGAATGGA GCAAAAAAATAAAGTAT GTATTTTATT TCTTACATTA
 3421 AGAGATGTGT CAAAAGAAAA TTAAGTGGT GTGAACTCTG ATTTTGTAA ATATTCTAA
 3481 AGCAACAAA TAAACAGAA CCAACCAAAA AGCTTAAAGC CAGACCTTGG AGTTGGGGCT
 3541 GCAGTGCCCT TGACTCTGAC TTTTGAAGAG CATCTCTAAG AACTATGGCC CAGGCTTTCT
 3601 AGTAAGAACA TAAAGTGAGA CTAATGAGTA AAGCTTAGAA TGCGACTGTT TTGTGACATA
 3661 CTCGTTAAAG TCGAATGAGA TAGAGGAAGC TTTGAAGTAA TTTAATATA GTTTAAACTC
 3721 AAACACTCAT CTAAATAAAA ATTAGGCTTT TGAACAGAT TGCTGAGTCA GGCAATCTTT
 3781 AGGTGCAGTA TATCTTGTAT ATGTTTGTAT CTGCTTCTCT ATCTGTTCTT GAGCTTCTG
 3841 AGCCCATAGA TCAAGACTAC AATGCTCTTA AATTAGTTAT GTCAATATTT GCCACAGTTT
 3901 GGTCTCAAT TAGGCACCCT TAAGAGGAAG CAAATTGAGG AATTNCNNTT CATCAGCTTG
 3961 GTTTGTGGAC ATACCAGTGG GCCTTTTCTT TGATTATTA TTGATGTAGA AAGGCCAGC
 4021 TCATATGGG TGGTACTATC CTTAGGCAGG GGTGTTGGGA GTTAAGTTGC AAAAGAAAG
 4081 TAAAGCCAGC TACAAGAAGC CAGCCAATA GCACCTTCTT TTGTGGTTT TCTTCAAC
 4141 TCCTGTCTTG GCTTCTCTCT ATGGTAGACT ATAACCTATA AGCCAATAA ACTCTTCTT
 4201 GGAA

Figure 7A
 (SEQ ID No: 52)
 Mouse IPM200 cDNA

1 VANHVKYFKA RVCQEAIWEA FRTFWDLPG RDEYRHWML CEDGVTSVFE MGAHFSQSVE
 61 HRNLMKKLA YTREAESSSC KDQSCGPCLS FPVPIGETST LTGAVSSASY PGLASESSAA
 121 SPQESISNEI ENVTEPTQP AAEQIAEFSI QLLGKRYSEE LRDPSALYR LLVEEFISEV
 181 EKAFTGLPGY KGIRVLEFRA PEENDSGIDV HYAVTFNGEA ISNTTWDLIS LHSNKVENHG
 241 LVEMDDKPTA VYTISNFRDY IAETLHQNFL MGNSSLNPDP KPLQLINVRG VLLPQTEDIV
 301 WNTQSSSLQV TTSSIXVLQP DLPVAPEGRT SGSFILEDGL ASTEELEDTS IDGLPSSPLI
 361 QPVPKETVPP MEDSDTALLS TPHLTSSAIE DLTKDIGTPS GLESLASNIS DQLEVIPWFP
 421 DTSVEKDFIF ESGLGSGSGK DVDVIDWPWS ETSLEKTTKP LSKSWSEEQD ALLPTEGREK
 481 LHIDGRVDST EQIIESSEHR YGDRPIHFIE EXSHVRSTIP IFVESATPPT SPIFSKHTSD
 541 VPDIDSYSLT KPPFLPVITA IPASTKKTDE VLKEDMVHTE SSSHKELDSE VPVSRPDMQP
 601 VWTMLPESDT VWTRTSSLGK LSRDTLASTP ESTDRLWLKA SMTQSTELPS TTHSTQLEEE
 661 VIMAVQDISL ELDQVGTDYY QSELTEEQHG KADSYVEMST SVHYTEMPIV ALPTKGGVLS
 721 HTQTAGALVW FFSLRVTNML FSEDLFNKNS LEYKALEQRF LELLAPYLQS NLSGFQNLFI
 781 LSFRNGSIVV NSRVRFESA PPNVNKAMYR ILEDFCTTAY QTMNLDIDKY SLDVESGDEA
 841 NPCKFQACNE FSECLVNPWS GEAKCKCYPG YLSVDELPCQ SLCDLQPDFC LNDGKCDIMP
 901 GHGAICRCRV GSNWWYRGQH CEEFVSEPFV IGITIASVVS FLLVASAVVF FLVKMLQAQN
 961 VRRERQRPTS SSRHPDSLSS VENAMKYNPA YESHLAGCEL YEKSYSQHPF YSSASEEVIG
 1021 GLSREEIRQM YESSDLSKEE IQERMRIEL YANDPEFAAF VREHQMEEL

Figure 7B

(SEQ.ID No: 53)

Mouse 1PM 200 amino acids

1 GAACACTTGT AATACAAAAC AATTCCTATT TACAAAGTTT ACTGGTAATA CAAATACAGT
 61 AGTTTACAGA GAACTTTCAT GTCTCTTAAT TCTTAACAAC GACCCTGTGA TACAGGTAGA
 121 GATTATCACA TGTAATTTCT TTGGTGAGTA AACCGGCTCA AAGAGCTTAG GTTATTTACC
 181 AAAATCAAAT ATTAAGTGAT AAAACCAAGA TTTGAGTCCA GGGTTTCTCA ATCTTAAATA
 241 CAGGAATCTT TCTAGATTAC TATGATTCTC AGAAGTTTTT TTTAGCTTTT TGGTCAAGGC
 301 TGTCAAAAAG AATAATTGCC AACTTAATAT TTGTTACCTA AGAGTTGTCC CTGTCTCTGA
 361 ATTGTCAAATA TGAAGCTTTT CTTAAGATTA AACTTTGACT CAGCTAATAA AATTTTCGGC
 421 TTTTTTCTCC TACTCATACA ATAAATTTGG CAAGTAAGTT TCTTATAAGC TTACCAGTAT
 481 TTTGCAAAATA CAACATATGCA AATATATTTA ATGGTCATTT AGGTTTATTA GCTTTTATAA
 541 AGGCTGAAAA TGTGGTTTAT TTGAGGCTGT ATTGAAAAAA TATACTTGAG CTTTTCCTAA
 601 AGCATAAAAAT AACATTGAGG GTGATTTAGC TAACACAATT AGTCAAGGAT TCTCAAGAGG
 661 AATGTGGTTT AGATCTTTAC AATACACTTT TTTTCAGAGA ATTTTGCCAG AGATAACATG
 721 AAATAAAATA TAATTTTCAAT GCTATTTGAT AGTAAATCCA AGCTTCCACA GGGATTCTGA
 781 TGAATTGCTT TCTACTAGGT TTACTTGATT TAAAAAACTG TTCTAATATA GAGAATTTCA
 841 TCTGCAGGGA AAATGTTTTT TTGGTTAAGA GTTCCTCATG TAGATAAACA CACTGGGCCCT
 901 CACATTTAAT GGCAAATTAA GCAACAAAGT TATCGCACAG CTATCATTTA TATTAAGTGC
 961 TTAATATGTT CCGGGCCTA CTCTAAGCAA AGTGAAGATT GAATTAGTTA ATTAGTTAAT
 1021 TTAATCCTCA CATTAGCTCT ACCATGAGTT TACTATTTCT ATTCCATTTT ATACGTAAGG
 1081 AAGGAGACAA AGTAAGTGAT TTTTCTATCA AGGAAGGAAA TTGCAAGAG AATAGTTTCA
 1141 TTACAAAAAC TAAATTTGTA CGTAGCTCTG TATTATTGAA ATAGGTAGAT ATAGTCAGTC
 1201 TGGACTTTTT ATGCTTATAC ATCTTAGTCC CTAGGAAAAC CCAGAACTAA CAGATTCAGA
 1261 AAAGTTGGAA AAATCAGTGA ATTATATGTG AAACACATTA TTCTTAGTGG ATGCTTGT
 1321 AAAGGCAAGG AGAGTGTTAG TAAAGAGCTT AGGTAGATTA GAATAAAGAA ATTGTCTCTC
 1381 TCCATCTGCT CTAATTAGCT TATCTACCA GCTTTTATAG CATGCTGGTT ATTTTCAGAA
 1441 AGAAGTGAGA GCTACTTTGA AAGGACAACC ATTTTCTTT CCGCTAATTT ATAATGGTTT
 1501 TGAAGTGGTT GTTCATTCTC AAACATAGAC TTTTAAATGT TAGGTCTTTC CTATAACTCT
 1561 TTGTTATTGG AAGTTTCAAG GATTTGGACA CTCAATTAAG GATTCTGTCC TCTCCTCATT
 1621 CCTTTGGTTT TGGCCCAAAT GATTATGTTT CCTCTTTTGG GGAAGATTTT TCTGGGTATT
 1681 TTGATATTTG TCCTGATAGA AGGAGACTTT CCATCATTAA CAGGTATTTA AAAATCTACA
 1741 TTTGTTTGTA TCTTTCCATA TCTGTAGTAT ATGTTCTTCA AAAATAGGAT TATTTGATGT
 1801 GATTGCTGTA AGAAATGGAA TCAAAACTTT TATTAATCTT TGATATGGCT TCATTTAAAC
 1861 CGTTTTAAAA TATCTCCCAA TAATTTTGGT TTTCCCTCAT TAGTAATTTT TGGTTTAAAC
 1921 CTFACTTTTA TTTATTTTGT TGAAATGGGA TGTGTATTTA CTTGATTTTG ATAACAATCT
 1981 TGAATGAAAG GAGTGGGAGT TAAATGGAAA AAGATGGACT GCCTCACTCC TCTTTTCCTT
 2041 AGATATGCAT GCCTGCCTAT GATTTGGGCA CTGGCTTCTC TATCTTAATG TAGCCCAAGT
 2101 GTCAGTTTTT CTTTAGTTGT TACCTTTTGT ACTGTATCTT CATTATCGAA GACTTGACTA
 2161 TACTTTCACT CTGTAGCACA AACCTACTTA TCTATAGAGG AGATCCAAGA ACCCAAGAGT
 2221 GCAGTTTCTT TTCTCCTGCC TGAAGAATCA ACAGACCTTT CTCTAGCTAC CAAAAAGAAA
 2281 CAGCCTCTGG ACCGCAGAGA AACTGAAAGA CAGTGGTTAA TCAGAAGGCG GAGATCTATT
 2341 CTGTTTCCCTA ATGGAGTGAA AATCTGCCCC GATGAAAGTG TTGCAGAGGC TGTGGCAAAT
 2401 CATGTGAAGT ATTTTAAAGT CCGAGGTAAG CGAACATCCA AATCCTTCAG CTCCATAATG
 2461 AAATTCAAAC ATAGTTTAAAT CATTGTGTTAG GTAACATTGT AAATCAAAAT TTATGATAAT
 2521 TTAGACAGGA CTGAGCCAAA ACTACCTTTC TACTGTTAAG AATATAGTGT TAATGGTAAC
 2581 TTCAGAGAAC AGTTTACATT AAGAGAGGAG GTTTGTTTTC TTTCAGTGC CCTCCAGTTA
 2641 AGGCAATAAT ATCATTTAAT AATGACATGC ACTTTGAACC AAAGGAAGAA CGCTTTCATG
 2701 ATTTGAGTTT GTAGCTTTTG GTGCGTATG TAAGAACTT TTTTCACATG AGGGCAGTCA
 2761 CAATAAGATG TCTTTCATTA ATTTCAACAA CATATTCAGA GAGGAAATGT CTTAAATCTT
 2821 TTTAAGCACT TCAAAAATAC CAGTTTATGT TTTGGGCTAC ATTAATTTTA ATTTTACTTT
 2881 CTTCAATTACA GTAAATGCCT AAGTWTACCC ACAAATAGC TTTACCAAAG NTATACTCAC
 2941 CTGCTTGCCCT ATTTAATTAA TAGTTATTAT ATATACAAAT ATAATGTTTC TATATTTTAT
 3001 AGTTTAGATA T

Figure 8 (SEQ ID NO: 54)

Exon 1+2, Human IPN200

1 TTTTTTTTTT TTTTATCAGA AATATGTGAT GACTTTTTGA GCAAGTAGAT GCAATGCAGT
 61 TATGTCACTG CATTTAGCCA AAAAAGCTCC AGGCCATTTA TAAACGTCAG TGTCTCCTTC
 121 CCCAGTGATC ATGAAAAGCA AAGAAGCTGA TTTTGAAGT TATGATTTCA GGAGAACATC
 181 TGCAAACATT AAGGAACTG AAAATCACAG TGTCCATTAG GAAAACATTG GATTAAATAC
 241 AGTATACTCA ATATCAGCTC CACTTTTGTG AAGTATAAAC ATGGACTTTT TTAAGAGATG
 301 GGAGAGACAC TCCAGCTCAT GAAGAGATGA ATCAATTCTC TTTGTAAAGAG AAAGGAATGG
 361 GAAATATAAA TTCTCTTCAG AAATGAAAAG TTTAAACTGG ACATACATAC AGAAGGCCTT
 421 TGAAGAGAA TCATTCCTAC ATCCCTCCAG AAAGGACACT TCAGTGTCTC AAGGAATCTG
 481 TAGGAATCAG TCTATGATCA TTGTAAGAAC CCCAGAGCAT GTTAGCTTTT TGTAAAAAAA
 541 CACCTCTCTA TTTTCTAGTG TGTCAGGAAG CTGTCTGGRA AGCCTTCAGG ACTTTTTTGGG
 601 ATCGACTTCC TGGGCGTGAG GAATATCATT ACTGGATGAA TTTGTGTGAG GATGGAGTCA
 661 CAAGTATATT TGAAATGGGC ACAAATTTTA GTGAATCTGT GGAACATAGA AGCTTAATCA
 721 TGAAGGTAAG TGTCACAACA AAGGAAGGGA TTCTTGACT ATTGTAGGAG CATTTACACA
 781 GCTAAGGCCT AAAGGAAGCA AAAGCAAGTG GCAAATGCCT GTATTACTCT TTTGTTGAAT
 841 TGGGCTATCT GAGTAAGCTG CCCTAGGGTG TGGCCTAGTC TTTTATTCCCT AGCTCTGGCC
 901 TCTATAATAT ACATTATTAA TATTTTCATG TTATTCTGTC CACAAAAAGA AAAANAAAGA
 961 CATTATTAAAC TCAGACAAGA GCCTCAGCCT TGTTTATAGA TNTAAATATT TGGGAAATAA
 1021 TATTCAGCAA AGGTTTAGGG TTAAGAAATN TAAATNCCGT GAGGAGNCAA ACATTTTTTG
 1081 CCAAAGTT

Figure 9A SEQ ID No:55
 Exon 3, Human IPM200

1 GAGTAAGGAT TTTCTTATTG CATTCTGTGG TATAGTTTAA CATGTTCCCT TTGCCCAGTA
 61 TATTTTCTTG TAAATGGGTA ATTCATTTCT TTATTTTAA TTAATAAACC CCACAAACTT
 121 CTTCTGTGTT AGAAATTTCA AACATCTACA AAAATAGAAT ACATGATAAG GTCCAGTTTT
 181 AACACTTGTC AATTCACAAC CAATTTCCAA CCTTTACCCA CTCTCCTCT CTGGTAGAGG
 241 AGTTACTTCT TTTAGTATGT GTCCCTTTA CTAGATAGCT CCTTAAGTAG AGGAATATTG
 301 TCTTTGTGTT CCTAGTGTCT TGTGCAGAGT CTGGCATATA GTAGGTGCTC AATATATGCT
 361 TGTTGAACGT ACCACAATTA TTTCTTGTTT TGAGAAGGCT CCATACAAAT ATGTCTTGAG
 421 GTTAGAATGC ACCGAATTTT CAGGACAATA AAACAAACTA TTTATAGGAA TGGTTTTTGA
 481 AGTCAGTTCC TTATTTCTCT ATAGGAATTC TGACTTAATC GAGGACTGAA TTCATGCATA
 541 TGTTTTTGCT TTTCTTCTTA GACACTACTC TCAGTGTTC ACATCCAGAG GTGGACGCCT
 601 ATGAAGGTGC CTCAGAGAGC AGCTTGAAA GGCCAGAGGA GAGTGTGAGT GACTACTCTGT
 661 TTTGTTAGTT AGTTTCTAAC ATGGAACATA GAGATTAAAG GAGAGTTTAT CTCCCATTGC
 721 TGGACTACAC AGGACTTCAT GTAGTGTCTT GTTAGAAAAA TGACATGGAT CCTAAAACCA
 781 GTACATTAAA AACAATTTTG AGATTCTCTG GAGAACTGAG TAAATCTGCT CTTATTGGTG
 841 AGTTTTTGGT GAGAGCTTCG AATTATAAAT GAAGTGGACT GTCATTGAGG TAAGCCCACT
 901 GCCTCTTGTT GCCTCTGTGA CATGATTTTC TATGGTGGTT TTGCCTATGT TCTTCTCACC
 961 CTTAATAGAC CAGATCTTAG CCTTCTTTAG TGGGTAATAA TATACATTTT ATGTAGTTTA
 1021 AAAGTCAAAA AGTACCATGC ATTGTGAATG TACCATTATT AATAGAAACC TGTCCACTAA
 1081 ACAACACTAA ATCCTATAGC TGAGTCTCTA TCACAAAAGA TACATACAGG TTAACAAAAA
 1141 ATTTACACAT CGCCCAGGAA TATAGAAACA TTTTGTGTAG ATAAGATATT TAAATACTGA
 1201 ATTTAAAAAA TTAGGGGGTT CACAAAATCC TGTTTTTTTT TTT

Figure 9B SEQ ID No:56
 Exon 5, Human IPM200

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1 GTGCAGTGGA TCTTGGCTTA ACTAAAAACC TCCGCCTCCC AGGTTCAAGT GATTGCTCCT
61 GCCTCAGCCT CCTGAGTGNG NTGGGATTNC AGATGCATAC TGCCATGCCC NAGNTAAATT
121 TTTGNATTTT TAGTAGAGAT GGGGTTTCAG TTGGCCAGGC YTGGTCWTTG AACTCNTGAC
181 CTCAAGTGAT NTGGCCCACC TTCGGCCTCC CAAAGTGCTG AGATTACAGG TGTGAGCCAC
241 TTCTCCTGGC TGTTAGCCTG TGTCTTAAAG TCTACCCAAT TTGTTCCAAA GTCAAATACG
301 AAATAATAAG ATTATCTTCA GAAGCTGCCT TTAGCACAGT TCTGACACAT TGAAACAATC
361 AATAAATGTT TGTGTATTGA ATGAATAAGC CTGACATTT ATTGTTCTTT CTCTAAAAAT
421 TCAGATTAGC AATGAAATTG AGAATGTGAT AGAAGAAGCC ACAAACCAG CAGGTGAACA
481 GATTGCAGAA TTCAGTATCC ACCTTTTGGG GAAGCAGTAC AGGGAAGAAC TACAGGATTC
541 CTCCAGCTTT CACCACCAGC ACCTTGAAGA AGAATTTATT TCAGAGGTGG GTGATTAAAA
601 AAAAAACAAA CAAGGCAGTA TGCCTACTAT GTTAGTTTCC TATATTACAC AACTGTTTAA
661 AAGATAGGTT TAGGTTTCAA ATTGTTTGTC TACTTGTTTC CTGGAGTGGT TACTTAGCCA
721 TTTCTTCASA AAACCTGTG AAAAGTCATA GGACAGATGA ATTCCTTCAC AGAAAGAAAA
781 ATCTTGCCAT CTGCTNAAAA AATAAATGCA ATTTCCAAC TTTGCTGCAC AGCCAAGAAA
841 GAATGTGTTT TGGTGGCATG GTTTTGAATT GAAAATTTTG NGAGAAATAA GCTTCTCTAA
901 NAAACTACAC CACACTGTAT TGTTTNTCTT ANGGGAACAT TACATTTAAT GCCTTTTAAT
961 TCC

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Figure 10A (SEQ ID NO: 57)
Exon 6, Human IPM200

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1 AATAAAATAA GAATGGCTTA TTACAGCTTC CTTTGAAC AATTTTTTTT TTCACATTTT
61 CATCACATAA GGGAAAAAAC AGTGGTNTGG CCACCAAGGA GTATGCTTTT TATAATTTGG
121 AAAAATTAAT ATTAAGCAC ATTGAAACCT TGAAAGACAA AATGAAAAAG AAAAATGTGG
181 CAGTGTTTAG GTAAAATTTT TTCTTTCATT TTCTGACCTG GGTATGCCTA GCTAAGTGTA
241 TAAGCTTCTA ATAGTTGTGA ACAGTTCACT TTTTATTCTA CTCTTAAAG CATTATTTTC
301 TATATATTTT TCCATATTTT TACATAGTTA TCATTTTAT TTGTACTTTT AACAGGTTGA
361 AAATGCATTT ACTGGGTAC CAGGCTACAA GGAAATTCGT GTACTTGAAT TTAGGTAAAT
421 AGACTTATCT AAATATGCAC ATTTTCAGTA GTATTCTTTA TTCTGAATGG AATGTCCATT
481 ATATTTATCA CACATATCT AACAATAAAT GGTTTGAATG CTGTAACCTA ATGCTATTTT
541 TGGTAAATTA GTATTCTTGA TGTTAGTTTT TCAGGTGAGA AAATTGAGTT AGAAAAAGAC
601 CAAATAATAA CTCAAAGAGA TATATTAGGT CTAAAATTGG CTAGGTAAAG AATTCAGGAA
661 TTCATGTCTC CAGCTTGCTG CTGACAAGTT ACGTAGGTCT TATTTGGCAC TGATAGGAGC
721 CTGAAGGCAG ACGAGATGTG GCCCCAGTGT TTTCTTAAAG CTTGTCAGTG TGGTGATTTT
781 GACATCTTGG TATGAGGCCA CCCTGGAAGG GATGCATTAG TCCTTGTTTA AACATAACAG
841 TTCTGAGTAA ACCAGACACC TCTTTTAAAG ACATTTATTC CCTGCTTAAG ACTCACAGTG
901 GAAACACTTG GTGACCATTT ACTGAATGAA TACTTTTACT GAGTGAA

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Figure 10B (SEQ ID NO: 58)
Exon 7, Human IPM200

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1 AACCTTATTT TATCTTCTTT TGGTCTGTAG TTTCTATACC TATATTATGA GGATACTAAT
61 AAATCTTAAT GAAAGATTTA AATCAAATTT TTTATAAAAA TGCTTAGCAT AGTTCCCTGG
121 CACATGGAAA GTTCTATTTA AGCATCTGCT ACATAAAATA ATAAATATTA AAAGGTTATG
181 CAGTATACCT GTGGATTAGT CAGTCCTGAC ATTTACCTAT ACCCTTACTA CTTNACAGTG
241 TACCATCTGA TTTTAATACT GCATAACATG TTGTATCCCA AAAAAAGAAG GTTCCCAATT
301 TTGTTAAAGC CAACAACCTG AGTCCTCTGC TGATTTACTG AAAAAAGTTT CTTTATGAAG
361 AAAATAGCCAT ATGTGAATTA TTTTAAAGTA TTTTAAAAAT TTAGAAGAAA ATAAAGACCA
421 TGGTTTAAAA ATAAATGCT TTTTTCACCT TTGCTCACTT CCTTCAATCC ATAGGAATTT
481 GTCAGCATTT TTATTTAAGG AAGCATTTCA AAGAAATTCA GAGGAAATAC ATGAATAACT
541 TGCACCTTGA TGAATGATGT GACAATAATA ACTGTCTCAA ACTCTGTTTA ATATTTTTTAA
601 TTTTGTGTTT CAGGTCCCCC AAGGAAAATG ACAGGTACTT TTTGGCACTT TCTCTAATGT
661 CCATTGAATT GGGAGACAGT TTAGTAAATA TAGCAGGCCG TAGGTCCAGG GGAGCATAAC
721 TCAAATATTA TATCACTTCC AATATCACTG TCTGACTTTT TCAGATCAGG GTTTGCAAAC
781 TTTTCTATTA AGAGTCAGGT AGCCAATAAT TTAAACTTTG TAGGCCATAT AGTCTCTGNT
841 GCAACTACTC AATTCGTCCA CTATCAGGGA AAAGTAGACA TAGACNATAT ATTGGAAACT
901 AATGAGCTTT GCTGNGGTTT ACTTTATGGA CATTTGAATTT TATATAATTT TCACATGGCA
961 CAAAATATTG GTCTTTTTTTT GANTTTTTTC AACTATTAAA AA

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Figure 11A (SEQ ID No:59)
Exon 8, Human IPM200

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1 AAAATGGCTC AGATTCATCC CTGCAAGGGG TTGNCCTCTG TGGCCTCCCT NAGAATTCTT
61 TTCCCCTATT CTTAGAGCTA TGACCCCTCA TTCTTCTGGG GAAAGGAGGA GAGGATGGAC
121 AAAATGTTGT CCAGGGTTTT CAGAGAAAAG TGATGGAATC CATGCTCTTT GAGACTCCCC
181 CTCTAGGTCC AATGTTTGTT CTTTCATGGGT TCAATGCTCC TTTCTTTGTG CTTCCCTTAGC
241 TGAACCTAAC CTGTTCTCTC TTTCCATCCA TAGTGGCGTA GATGTTTACT ATGCAGTTAC
301 CTTCAATGGT GAGGCCATCA GCAATACCAC CTGGGACCTC ATTAGCCTTC ACTCCAACAA
361 GGTGGAAAAC CATGGCCTTG TGGAACCTGA TGATAAACCC ACTGTTGTTT ATACAATCAG
421 TAACTTCAGA GATTATATTG CTGAGACATT GCAGCAGAAT TTTTGTGCTG GGAACTCTTC
481 CTTGAATCCA GATCCTGATT CCCTGCAGCT TATCAATGGT GAGTTTGATA TCCATCATGA
541 AGTCCTTGTA TAGTTTCTTT TCCAGTATGC TCTGGTGTA ACTAATTTCC TGAAATATAT
601 AAGGTTCTGA CCATTCTCTA GACTTTATGA GACAGGAGCC AACCTGATAT GAATGGAGTT
661 TTAGCCATGC ACCTATTTTG GATAGATTAA TCCGGGGCTT TCTGGAATAT TTGTAGACAA
721 AAGGCCACAG AGTGTGGAAG GTGGCAGTTA GAAGTAGTTT AGAGAAATAG GAGCAAAGCA
781 TAAGAAAAAG GAAAGTAGTA CTTGGAAGTG TGCATTGAAA CAGGCTATAA TACTTCCCTG
841 ACAACCGAGA CATGACCTCT CTGAGGTAAG TCAGCTAGTA AAGGCTTAAA AATCAGAGTG
901 TAGAGAAAAA GGAAGAGCTC

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Figure 11B (SEQ ID No:60)
Exon 9, Human IPM200

1 AGCATAAACC CAAAGGAATT GAAATTTTCA GTACAACCTT TTTTACTTA AAAATTAATT
61 TAAAAATAAG CGCTTCATAG GAATCTTGAA CAGAATAANA ACTAAGTTGA GAAAGGAAAG
121 GAAGTAATAG AGGAGTGTCC TAAATGTGAT AATGGGAAGA ATCTTTATTT TATGTTAGAT
181 TCTTATAATT CAGGCAGATT GTGCTAATAT AAATAAAATA TCTGAATAAA GTAACAAACA
241 TTTTCTAAGT AAGTGTGTCC CGTATTTTCT GCCAAAATCT AAACAATGAA GAGAAAGAAC
301 TTGACTTTCA GTTGTCCTG CACCTCAAAT ACAATAGGGC CTCATCTAAA AATGTTCTTT
361 AATATTGTTT TTTCTCAGT GAGAGGAGTT TTGCGTCACC AAAGTGAAGA TCTAGTTTGG
421 AACACCCAAA GTTCAAGTCT TCAGGCAACG CCGTCATCTA TTCTGGTATG TTTTATGTT
481 TTAATGCTAGA ACCAGGCCCT CAAGCTTGAT ATCGAATTCC TGCAGCCCGG GGGATCCACT
541 AGTTCTAGAG CGGCCGCCAC CGCGGTGGAG CTCCAGCTTT TGTTCCTTT AGTGAGGGTT
601 AATTTGAGC TTGGCGTAAT CATGGTCATA GCTGTTTCCT GTGTGAAATT GTTATCCGCT
661 CACAATTCCA CACAACATAC GAGCCGGAAG CATAAAGTGT AAAGCCTGGG GTGCCTAATG
721 AGTGAGCTAA CTCACATTAA TTGCGTTGCG CTCAGTCCCC GCTTTCCAGT CGGGAAACCT
781 GTCGTGCCAG CTGCATTAAAT GAATCGGCCA ACGCCGCGGG GAGAGGCGGG TTTGCGTATT
841 GGGCGCTNTT TCGCTTTCTN GCTTACTTAC TTCGTNGGCT TCGTCCGNTC GGCTGCGGCC
901 GAAGCGGTAT CAAGCTCACT CAAAGGCGGT AATACCGGT ATCCACAAGA ATCAGGGGAT
961 AACGCAAGGA AAGAACA

Figure 12A (SEQ ID NO: 61)
Exon 10, Human IPM200

1 GGTGAGAGGT GATATGCTTT TTNTCTAGAT ATTGGAATTN GACTATAAAT CGTGTTNGAT
61 TCTGGAGCCC ATGTCTCCTC CTACTCCTAA TATTATTAAT ACACCGCCTC CTGTGCCCTA
121 GAAGATCTGG GAATATAGAC AGATAGGTGG TATTTAAAT CACTTTTAT ATGTTTCTTT
181 TATCTATGAT ATGATTTAGC CTTTTTTTCC CCCCAGGATA ATACCTTTCA AGCTGCATGG
241 CCCTCAGCAG ATGAATCCAT CACCAGCAGT ATTCCACCAC TTGATTTTCA CTCTGGTCTT
301 CCCTCAGCCA CTGGCAGGGA ACTCTGGTCA GAAAGTCCTT TGGGTGATTT AGTGTCTACA
361 CACAAATTAG CCTTTCCCTC GAAGATGGGC CTCAGCTCTT CCCCAGAGGT TTTAGAGGTT
421 AGCAGCTTGA CTCTTCATTC TGTCACCCCG GCAGTGCTTC AGACTGGCTT GCCTGTGGCT
481 TCTGAGGAAA GGACTTCTGG ATCTCACTTG GTAGAAGATG GTGAGAACT TTAATTGCTT
541 TTCGTACTTC TTATTGTATC CGATGACAGG GGTTTTAAAG AGAGGAAGAG ACTATGGCTA
601 TGAAAAAATC ATGGTAGCAT TCATTAGGGG GAAAAATGTCT TGGTAAAATT GTGTGTGAGA
661 GGAAACAATC AAATTTAATT TGTTGGAATG GAGAATCCAA ATAGGTAAAT AATAAGAAAT
721 AAAGTTGGGG AGCTGGGGTG GGGATCAATT AACAGACATT TTGAAGGTCA TATTGAAGGG
781 TATATAGTTT AGTTAAATTA CTGCTACTAC TATTAAAGAG CCACTTTACT TAAATATGG
841 AGTAATAAAC AAATAGCACC AAAGAAGATT ATTCAACTAG GTTATAATAC AATTAGTTGT
901 GGGGGCCAAG TCTAAAGATT TTTACTTGTA GTAGTATTGT GAAGGGAAGA AGCCGAAATC
961 ATGGAGCCAC AGCAGAGATA AAGAAGTGAA AATGAAATAG ATAATCTAGA TGT

Figure 12B (SEQ ID NO: 62)
Exon 11, Human IPM200

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1  GTATTTGTGA TCCTCCGAGA AGGAGATAAT ATTCAATGAG TGAAGTGTCC ANATTGCAAAA
61  CNACATGATC AGATCTTCTT GGTGTGTTGC TAGATATGGA AAAGCAAAAAG TCAACAATTG
121 TCCCTNTTAA CTTACACAGGG AAAAAACAGG CAACTAGTTT TATTAGGAGA NCTAGGAATA
181 CATTTTGGCA ACTCTGTAGA TTAATTAATG GAAAACTTTA TTTTATAGGAT TAGCCAATGT
241 TGAAGAGTCA GAAGATTTTC TTTCTATTGA TTCATTGCCT TCAAGTTCAT TCACTCAACC
301 TGTGCCAAAA GAANCAATAC CATCCATGGA AGACTCTGAT GTGTCCTTAA CATCTTCACC
361 ATATCTGACC TCTTCTATAC CTTTGTGGCTT GGACTCCTTG ACCTCCAAAG TCAAAGACCA
421 ATTAATAAGT AGCCCTTTCC TGCCAGATGC ATCCATGGAA AAAGAGTTAA TATTTGACGG
481 TGGTTTAGGT TCAGGGTCTG GGCAAAAGGT AGATCTGATT ACTTGGCCAT GGAGTGAGAC
541 TTCATCAGAG AAGAGCGCTG AACCCTGTC CAAGCCGTGG CTGAAGATG ATGATTCACT
601 TTTGCCAGCT GAGATTGAAG ACAAGAACT AGTTTATGTT GACAAAATGG ATTCCACAGA
661 CCAAATTAGT AAGCACTCAA AATATGAACA TGATGACAGA TCCATACACT TTCCAGAGGA
721 AGAGCCTCTT AGTGGGCCTG CTGTGCCCAT CTTGCGCAGT ACTGCAGCTG AATCTGCGTC
781 TCTAACCTCT CCCAAGCACA TATCAGAAGT ACCTGGTGTG GATGATTACT CAGTTACCAA
841 AGCACCTCTT ATACTGACAT CTGTAGCAAT CTCTGCCTCT ACTGATAAAT CAGATCAGGC
901 AGATGCCATC CTAAGGGAGG ATATGGAACA AATTACTGAG TCATCCAAT ATGAATGGTT
961 TGACAGTGAG GTTTCAATGG TAAAGCCAGA TATGCAAACT TTGTGGACTA TATTGCCAGA
1021 ATCAGAGAGA GTTTGGACAA GAACTTCTTC CCTAGAGAAA TTGTCCAGAG ACATATTGGC
1081 AAGTACACCA CAGAGTGCTG ACAGGCTCTG GTTATCTGTG ACACAGTCTA CCAAATTGCC
1141 TCCAACCACA ATCTCCACCC TGCTAGAGGA TGAAGTAATT ATGGGTGTAC AGGATATTTC
1201 GTTAGAACTG GACCGGATAG GCACAGATTA CTATCAGCCT GAGCAAGTCC AAGAGCAAAA
1261 TGGCAAGGTT GGTAGTTATG TGGAAATGTC AACAAGTGTT CACTCCACAG AGATGGTTAG
1321 TGTGGCTTGG CCCACAGAAG GAGGAGATGA CTTGAGTTAT ACCCAGACTT CAGGAGCTTT
1381 GGTGGTTTTT TTAGCCTCC GAGTGACTAA CATGATGTTT TCAGAAGATC TGTTTAATAA
1441 AAATCCTTG GAGTATAAAG CCCTGGAGCA AAGATTCTTA GAATTGGTAA GCATAAAAAG
1501 TGAAACATGG GCACTAGTGA ATAATCATGT ATGACCGACT CCTCCTCCCC TCTAGCACAT
1561 AAGGTCTGAG CCAGGGAAG TGTGATCTGC TGTGAACATT CACTTCCTAT CATTACAAA
1621 TAGTATCATG GCCTAGGGTT GGTAAGAAAA CAGTAAGACA TACAAGAAAT GGAAAACACA
1681 AAAGTGGCAT GAGAGTGATG TGATAATTTA CAAGGAAGAT TGTTTTCCAT GAATTATGGG
1741 GACTACAGTA AGGTTTGACA TTTCTCTTCA CATTTTACTG NGAAGCTAAT GTTTTGGGGG
1801 GTACCTATGT TGGCTCC

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Figure 13 (SEQ ID NO: 63)
Human IPM200, Exon 12

1 GGG AAGGCAG GGCACATGCA GAAGCAAGAG GCAGTGGAGA ACCACATCCA GAAAAGCCAC
 61 AGTGTGGAGT CTGAGAAAGT TTCCAAAACC AAGGACGGGA AACAGATACT GTGTTCCAAT
 121 CTAGACTAAT TCTAGATCTC TGGAAATGCT AGAGAGTTCA GTGATGAGCA GTCCCTGATTC
 181 ACTGTACCTG GAGGATTTTG GTTGGCAACC CAAATGAAGG GATAATGATG AGTTAGAAAT
 241 TTTTGTAGTA ACCCCCAATG TATTACTGTT TCCACTATTC AAACAGTAGC ACATCATTCCT
 301 AGAAGGGACC TTAGAATTCC ATGGGGTTCC TAAATATCAC TATGAAAATC TTATAGCATT
 361 TCTAGTTTAT ACTGTCAAAT CATTCCTAAT TTGTACTTTT GTTAATTAAC AGTTTAAGTG
 421 TAGATAAAAT ACAATTAGGA AAAGTGAGGC AGGGTCTTAC CTGTGTTTTT GTTTTGTTTT
 481 GTTTGGGTAT GTATTGAACA AAATGTGACA CGCTGTCAAT AAACCTACCA CTTTGTGATA
 541 TTGTAGCTGG TTCCCTATCT CCAGTCAAAT CTCACGGGGT TCCAGAACTT AGAAATCCTC
 601 AACTTCAGAA ATGGCAGCAT TGTGGTGAAC AGTCGAATGA AGTTTGCCAA TTCTGTCCCT
 661 CCTAACGTCA ACAATGCGGT GTACATGATT CTGGAAGACT TTTGTACCAC TGCCTACAAT
 721 ACCATGAACT TGGCTATTGA TAAATACTCT CTTGATGTGG AATCAGGTAT GATATTGCCT
 781 AGCATGGTGG TTTCTTAGTA GAATCCAGTG ATTATTCTTG TGTGTTTTCT TCCTCATTGC
 841 ATTAAGGTGA ATCCAATACT TGCAGGAAAA AAGAGTACTA TGTCAGACAA ATCTTCCACA
 901 TCTTGGTAAC TAGTAAAATA TTTCTCCCAA GAACATCAAT ATCATTCCCT TTCAAACA
 961 TCGTCCAAAC ATGTTACTTT ATTATTTTAC CTCCATTCCCT TTCTCTACCC ACTACATCTG
 1021 GCTTTGGTTT TTATTTACCT ACTGGATCTA TTCTTGCTAT GCCTTCATGT TGTCAGTGCA
 1081 AGGGTTTGGG CCAT

Figure 14A (SEQ ID NO: 64)

Exon 13, Human IPM200

1 GCTCTCTCTC CCCATTCATG TTCTCAGTGT TGTGCAAGGC ATGTAGCAGT GTATGTAGAG
 61 TGGAGGTCAA CTGCAGCAGG TTGGGGTTGG TGGAAATGAA TGGTCCATGA AAACCTGCATT
 121 TAATTTAGAT CTACAANTAC TATTGTGTTT AACTTAGATC TGCAATTACA TGGCATGGAT
 181 TTCTAAAGCT TCTACATGCT CCCTAGATAA AATATGTTAA GGCTTAGATA GGTCATAGGG
 241 TTTTATGATT TGGNCTCTGA GTTGACAAAA AATTTGACAA AAGCTTATTG ATCTATGATG
 301 AGTGAGAGTT TTTGTGTGTG GTATTGGTGG CGGATGGTGY ACTTTAATGG TTCTGGAAAG
 361 GAGTTGTCCC ATATACTTTG GGGGAGAACT TTAATGAAGG GCTTTGTATA CCCCAGTTTC
 421 TGTGTTTTGC CTTTCTTTGC ATTATTCTTT GTTTAATGTT TTAGGTGATG AAGCCACCCC
 481 TTGCAAGTTT CAGGCCTGTA ATGAATTTTC AGAGTGTCTG GTCAACCCCT GGAGTGGAGA
 541 AGCAAAGTGC AGATGCTTCC CTGGATACCT GAGTGTGGAA GAACGGCCCT GTCAGAGTCT
 601 CTGTGACCTA CAGCCTGACT TCTGCTTGAA TGATGGAAG TGTGACATTA TGCCTGGGCA
 661 CGGGGCCATT TGTAGGTATG TTGTAGTTAC AGATTTTGAC TTTANAGGCT ATAGATATTT
 721 CCTCTAAAGA AAAGGGGCCT GCACCTATAA TTTTAGGATA CTTATTATAG TATGCATTAT
 781 AGAAGTTATA TCTAGGCAAT AGATGGGAGC CATCTAACTG TCATGTGAGG ATGAGTTGTT
 841 TAACAGGCCCT GAATTTCAAT TCAGTAATTT ATGCTGTTAG GGAAGTCAA AAAAAAATT
 901 GTCTAAATAT GTCCTACTGG CTGGGTGCAG TGGCTCACGC CTGTAATCCC AGCACTTTGG
 961 GAGGCCAAGG TGGGTGGATC ACCTGAGGTC GGGATATTTG AGACCATTCC CTGGGCAACA
 1021 TGGCCGAAAC CCCATCTTCT ACTAAAAATT ACCAAAAAT TAGCCTTGGG GTGTGGGTGG
 1081 GCCAAGGGCC ACCTGTTNAA CTCCCCAAGC TACCTTTTGT GGAAGGCCTT AAGGGCAAGG
 1141 GAAGAAATTT GCTTTG

Figure 14B (SEQ ID NO: 65)

Exon 14, Human IPM200

1 AGGAAATAAG TAGAAAATAA TTCCAGACTT CTCTTATAT GAAAGAAGGA TAAAAGTTTA
 61 TAAGGAGAAA AACCAGTCCC CGTCATGTCC AGAGAAATTA ATATTTACCT AGAAAAAGCA
 121 GTGATTTCCCT TTCCCTGTGG CCTTAGGGTT TGAAGGATAT CTTTAGCATA CTGAAAGGAC
 181 ATGGGGCGTC TGGAGGCCTG GGTCTAGGC CCAGTTCTGC AGCAGACTAA TTGTATGGCC
 241 TAATGCCAGT CACTTTCCTT CCTAGGCTTG TTTTTTGGTT ATCTATAAAT AAGGATGTTA
 301 AGTAGAATAA TTTCTTAAA CCTATTTAGC TTTTATTCA GTTTTCTTTC AAACAGTCAT
 361 TGAGGACCTA CTAGGTCTGT GCTGGGCTTT ATGCACTGCC TTAAATTGTA TGATCTTTTA
 421 ATCTGTCTAT TCAACTCTTT ATGAAGCTTC ACGTGGTCAG CATTTATTTT TCTACTTTCC
 481 TCTAGTCCCT CAGAAGGTTT TGCTGTTAAT TGTCAGTGTG AGCAGAGTGA TTCAGATATC
 541 GGAAGTGGTG ACTGTTGGTT GCAGGTGCCG GGTGGGTGAG AACTGGTGGT ACCGAGGCAA
 601 GCACTGTGAG GAATTTGTGT CTGAGCCCGT GATCATAGGC ATCACTATTG CCTCCGTGGT
 661 TGGACTTCTT GTCATCTTTT CTGCTATCAT CTACTTCTTC ATCAGGACTC TTCAAGCACA
 721 CCATGACAGG AGTGAAAGAG AGAGTCCCTT CAGGTAAATA AGAAAGAGCA CA

Figure 15A (SEQ ID NO: 66)
Exon 15, Human IPM200

1 GTCATTGGTT ATTATATTCT TATTGGGGTC TGACCTTTTC ATTAGACCTG TAACCTTCAT
 61 CCAGGGCAGA GATAAAAGAT TATTTGTGTC AGCAGTGTGT AGAACAGTCC TATGCACATG
 121 ATCAATGCTC GGTAAATATG TGTAGACCTG AGTTGAATTT AATTGAGGCT CTGCTTCCCC
 181 TAGACCGTAA TATTTATATT TCAGTCAGAT TTGCTGCGTG GCTACACACT GATTTTCAAT
 241 GTGTATAACT CTGGGAATGA TGAAGCTACA GTTTATGAAG CACCATCTAC TGGCAGACAT
 301 AGTTTCCAAC ATTTATGAAT GCCAGGCGCC ATGGCAAATA AGATGAATGA GACATGGAAC
 361 AAGTCCACAG GGCACCTGCC ATGGGTGTGA GGAAATCATA ATGATAACAC CTGACAAATA
 421 ATTTTTGAGG TTGATCTAGA TGTTTTTCAC AGTTATGTCC CACCATTGTG GTAAAGTGCA
 481 CCTGTTTTTC TTCAACAGAA ATATTGTCCC AGGTAAATAG TCTTCCACAT AGTTGAGCAT
 541 CCAAACAAGA GCCTGAATCC ATCATATCTT TCTTTTAGTG GCTCCAGCAG GCAGCCTGAC
 601 AGCCTCTCAT CTATTGAGAA TGCTGTGAAG TACAACCCCG TGTATGAAAG TCACAGGGCT
 661 GGATGTGAGA AGTATGAGGG ACCCTATCCT CAGCATCCCT TCTACAGCTC TGCTAGCGGA
 721 GACGTGATTG GTGGGCTGAG CAGAGAAGAA ATCAGACAGA TGTATGAGAG CAGTGAGCTT
 781 TCCAGAGAGG TGGGAAACTT TGCATTTATG TTGCTGTGCG AGCTACTGCT GGTGTGTGTG
 841 TGGGGGAGCA GGGGGTGTG GGTG

Figure 15B (SEQ ID NO: 67)
Exon 16, Human IPM200

1 CTTTAAGGAA AGTGTAAGAA AANTATTTTA GTAAATGGG TTTTTTACCT CGTATCCTCC
 61 TAGTCTATGA TATGCACAGA GTATTTAAAT TCTAAGCCGG TNCCTTATTT CCCCCACAAA
 121 TGGCGCTTTT TTTTTTTTTT TTTGCGGTTA TTAAGTGGTA CTCTCTCCTT CCTCCCTTTC
 181 TTCCTTAGAA ATATGTCTGA TTTAGAGCAG GACATGTAAT ATCCAGAGTA GTGTATGTAG
 241 ATCCTTCCAT TTCTCTGAAA GTGCACACTC CTGCACTTCT TTCTTATAGC ATACTTCTGA
 301 ATAGCCCAGA ATGTAACAAT TCCTTATGAA AATTAGAACC CCTTTTAAAA GGCTGTTGAG
 361 GTTTTTCTAA TGCAATGTGT GGCCTATTGT TTCTTTTTTG TTTAAGGAAA TTCAAGAGAG
 421 AATGAGAGTT TTGGAAGTGT ATGCCAATGA TCCTGAGTTT GCAGCTTTTG TGAGAGAGCA
 481 ACAAGTGTA GCTTTTGAAA CAGCCCCCA CCCCACCTA CAGACTTAAC AGTTTACTCT
 541 AGAGTAATGT CACACCTGAG TGAGCACATA ATTTCCCTGTC CATGTGACAG GAGTCTCCGT
 601 GATAACCAAC ATTTGTTGAG TTCTTCAAAG TTTATGCATG TCCAGGCAGA TTATCTCATT
 661 TCTTCCTTAT AAGGGCTTTG TAAATTGAGT GTTTCCTTAT TGAGGAAAGG AAATCTTGGA
 721 GACATGAAGG GACTTACTTA AGATGACAGT GATAGCCAGN GGCAGAGAAG ATTTAAACT
 781 AAGATACTGT CTGTTTTGGA CTAGAGACGC CTGGACTACA CATAGTCTTT TCATATTTTC
 841 TCTCTTGTTG NCATAGATCT CACTACGGTG ATCTGATTGA TCTGATGCCA TAAATATTTT
 901 TTCATAGATA GTTCCTTTGA AGAACATTTG AGTAGCCATA AGTCCTCACA TATTTCAACA

Figure 16A (SEQ ID NO: 68)
Exon 17, Human IPM200

1 AAAATACACA CACAGAGTCT TATGAAACAA AGAAGATTTG AACTAGAAAG ACCCTGTGAG
 61 ACAAAGAAA GTATACACAG GCTCTGTAAC CTTAGGAGGT TCACAGAAGG AATAAGACAT
 121 TGGAAAGATG TCAGGCATGT AATCCAAACA GCATTTTCAG TTTTCACTTA GTTTCAGAGT
 181 TTTCATCTAT CAGGTAGCCG AAAAAATGTT AATGGAGTTG ATTGAGGATT AAAGCATCAC
 241 ATGATCTTTG TAGAGTGGAT TAAAAAAT TTTAGCACAG AACAGAACAA CTTTCCTTCA
 301 AATAAAGAAA AAAATAGAAA GTATTCATGA TTTTAGGAGT ATAGCTTAGT GATGTATGAC
 361 AGTAATTGCA TTTTATTACA TTCTTGCTTT TTTTTACTG AATTGCTCTT TGTGTTTTCA
 421 TGGCAGGGAA GAGGTTTAA CAAACTCCT GTTCTGAAAC TGATTAGAAG CCTGGAGAAG
 481 ATGGAGATTA CTTGTACTT ATGTCATATA ATTAACCTGG ATTTTAAACA CTGTTGGAAG
 541 AAGAGTTTTC TATGAAAAA TTAAATATAG GGCACACTGT TTTTTTTTCA GCTT

Figure 16B (SEQ ID NO: 69)
Exon 18, Human IPM200

1 AGGGTGTAGG CTTTTGAACC AGGACTCTTT AGGTTTAAAT CCTAGCTCTG CCACATATAC
61 TTTATTCTCC TCAAATTTAA AAGAGATAGT ATTAACAGTG TTTATATTGT CATATTGAGG
121 AATCTATGGA TAATCTATGG ACATCTCTAA GAACAATGTC TATCCACAAC ACAAGAGCTC
181 AATATACAGT AGTAGTTGCA GTGTGTTTCA TGA CTCAGCA ATATGTAGCA TGTATAGTCA
241 AAATAATATA AAATCAAATA TTCAAAAAC TGAATTACAA TAATACTGAT GAAGAAAGAT
301 GGAAAGATGT TTACAATGAG TAGAAAGGGT ATGTGTGGAA GTGAAGTTAT TCTCAATATC
361 TATTATTTGA TAATACCTAA AAGTGAAAAC CTCCAAAATA GTAATAGAGG CATGTTATTT
421 AGAAGTGCAA ATGAGACTAC TAGAAGAATT AGGTTGATGA AGTAAAAATG GCTCCCCTTT
481 GAAAGAAGGC ATGGGTAGAA GAAAGGCACA ATTTTTTCTT ACAAACCTTG TAGAAAAAAA
541 GTATTTGACC CCTTAAACAC AGTGCATACA GATTTTAAAC ATTA AAAACCA GACTTAAATC
601 AAAAAAGCCA CCTGTATGTA ATTCCAAATC AAAAGCAATT TATAAAGCAG AACATAGAAG
661 AGAATGGAGA CAGTTTCGCT ATCTGTGGAG ACTAATACAT ATTGATAAC CATATACTTT
721 CAGGGACAGA AATTAAGCTC TTTTAATGGA TGTTCCTTGT ACATGTCATT TTAGAAAACA
781 TCTGACCCTA ACTGTCAGCC TTATTCCTG TTTGGCAGAA CTTCCCCTGG CTCTCTGTGT
841 CACTGTAACA GGTGAATAAC TAAGAAAAAA CTGTGTCTGT AGACACTTGT TTATAATGGC
901 ATTCAGGGTC CTGGAGCTAG GCTGACAGAT GCTCCTCCAG AAGGTTAATG AGATAAAGGT
961 TCCTCCAGCT GGCCCTTAAG CAGAGATTAC ACCTGAGGGA AAGACAAGCA GATTATTCCA
1021 GAAACAGACA CTGCTACATG TTCTTCATAA ATTAACACCC TCATAAAGGT AAACCAAGAA
1081 GGTATCCTC AATCATCTGG TATCAATATA TAATTATTTT TCACATTCT GTTACTTTTT
1141 AATGAGATTT GAGGTTGTTT TGTGATTGTT ATCAGAATTA CCAATGCACA AAAGCCAGAA
1201 TGTATTTGGA AACTAGAAGA GCTATTTTGT TTTTGGAT TTTTCTCCAA GTTCAAGGAA
1261 CCAAAGGTAA GTTACTTAAA TGTTTACTTT TAAATTGCTT ATCTATAAAA TCTACCGATA
1321 GAAGTGAATA TTTAGAACCA ACAAGGCTAC CAATTTATCT CACGGGCTAG TATATAGTAG
1381 GCCTTGAATA AATATTGCTT GATTGATTGA ATAATTAATC ATCAGAAATG ATTTTCACTT
1441 GATTTAATAT TTA CTACATG GTCTTAAGTG CAGTGAAGAT TAACAAAATA GGAGAGATGA
1501 ATGCATCCTA TTTGCTGTTT TAAAACATTC ATTGAAAATT CTTATTATTA AATGTAAATA
1561 NTATTAGTAG ATCTGGTGAA AACTAAACTC CATTTATCCA CCCGAAATTC AACC AAATAA
1621 AACCTAAAGG ATAAAAGTAA TGTTTTAAGT CATTTATGGT CAGACAAAAA AAAGTAAGTA
1681 TTCTTACCT TCTCACAATG AAATCATGAG TTGCTTTCCC TTAGAAAATA GCAAACATTC
1741 TTCATCTTCA GGGTTCATGA TGACAACCAC TTCAAAATTT GGTGTTTTTT GAAAGTTGTA
1801 CGCATAAAAG AACTAGGCAA TGTATGTTCT TATGGCAAAT CTGCATCTGA ATATGAAA

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Figure 17 (SEQ ID NO: 70)

Promoter and Exon 1, Human IPM150

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1 GGGAGCTATT TTTGTTTTTT GGATTTTCT CCAAGTTCAA GGAACCAAAG TGTGTCAGGA
61 AGCAGTATGG GAAGCATATC GGATCTTCT GGATCGCATC CCTGACACAG GGGAAATATCA
121 GGACTGGGTC AGCATCTGCC AGCAGGAGAC CTTCTGCCTC TTTGACATTG GAAAAAAGTT
181 CAGCAATTCC CAGGAGCACC TGGATCTTCT CCAGCAGAGA ATAAAACAGA GAAGTTTCCC
241 TGACAGAAAA GATGAAATAT CTGCAGAGAA GACATTGGGA GAGCCTGGTG AAACCATTGT
301 CATTTCAACA GATGTTGCCA ACGTCTCACT TGGGCCTTTC CCTCTCACTC CTGATGACAC
361 CCTCCTCAAT GAAATTCTCG ATAATACACT CAACGACACC AAGATGCCTA CAACAGAAAG
421 AGAAACAGAA TTCGCTGTGT TGGAGGAGCA GAGGGTGGAG CTCAGCGTCT CTCTGGTAAA
481 CCAGAAGTTC AAGGCAGAGC TCGCTGACTC CCAGTCCCCA TATTACCAGG AGCTAGCAGG
541 AAAGTCCCAA CTTAGATGC AAAAGATATT TAAGAAACTT CCAGGATTCA AAAAAATCCA
601 TGTGTTAGGA TTTAGACCAA AGAAAGAAAA AGATGGCTCA AGCTCCACAG AGATGCAACT
661 TACGGCCATC TTTAAGAGAC ACAGTGCAGA AGCAAAAAGC CCTGCAAGTG ACCTCCTGTC
721 TTTTGATTCC AACAAAATTG AAAGTGAGGA AGTCTATCAT GGAACCATGG AGGAGGACAA
781 GCAACCAGAA ATCTATCTCA CAGCTACAGA CCTCAAAGG CTGATCAGCA AAGCACTAGA
841 GGAAGAACAA TCTTTGGATG TGGGGACAAT TCAGTTCACT GATGAAATTG CTGGATCACT
901 GCCAGCCTTT GGTCTGACA CCCAATCAGA GCTGCCACA TCTTTTGCTG TTATAACAGA
961 GGATGCTACT TTGAGTCCAG AACTTCCTCC TGTGAACCC CAGCTTGAGA CAGTGACGG
1021 AGCAGAGCAT GGTCTACCTG AACTTCTTG GTCTCCACCT GCTATGGCCT CTACCTCCCT
1081 GTCAGAAGCT CCACCTTTCT TTATGGCATC AAGCATCTTC TCTCTGACTG ATCAAGGCAC
1141 CACAGATACA ATGGCCACTG ACCAGACAAT GCTAGTACCA GGGCTCACC A TCCCCACCAG
1201 TGATTATTCT GCAATCAGCC AACTGGCTCT GGAATTTCA CATCCACCTG CATCTTCAGA
1261 TGACAGCCGA TCAAGTGCAG GTGGCGAAGA TATGGTCAGA CACCTAGATG AAATGGATCT
1321 GTCTGACACT CCTGCCCCAT CTGAGGTACC AGGGCTCAGC GAATACGTTT CTGTCCCAGA
1381 TCATTTCTTG GAGGATACCA CTCCTGTCTC AGCTTTACAG TATATCACC A CTAGTTCTAT
1441 GACCATTGCC CCCAAGGGCC GAGAGCTGGT AGTGTCTTC AGTCTGCGTG TTGCTAACAT
1501 GGCCTTCTCC AACGACCTGT TCAACAAGAG CTCTCTGGAG TACCGAGCTC TGGAGCAACA
1561 ATTCACACAG CTGCTGGTTC CATATCTACG ATCCAATCTT ACAGGATTTA AGCAACTTGA
1621 AATACTTAAC TTCAGAAACG GGAGTGTGAT TGTGAATAGC AAAATGAAGT TTGCTAAGTC
1681 TGTCGCGTAT AACCTCACC AAGCTGTGCA CGGGGTCTTG GAGGATTTTC GTTCTGCTGC
1741 AGCCCAACAA CTCCATCTGG AAATAGACAG CTACTCTCTC AACATTGAAC CAGCTGATCA
1801 AGCAGATCCC TGCAAGTTCC TGGCCTGCGG CGAATTTGCC CAATGTGTAA AGAACGAACG
1861 GACTGAGGAA GCGGAGTGTG GCTGCAAACC AGGATATGAC AGCCAGGGGA GCCTGGACGG
1921 TCTGGAACCA GGCCTCTGTG GCCTGGCACA AAGGAATGCG AGGTCCCTCCA GGGAAAGGGA
1981 GCTCCATGCG GTTCCAGATC ACTCTGAAAA TCAAGCATA CAAAAGTAGT TTTAAAGTTC
2041 CAAAATCAAC AAAATAACAA GGTAATCAGT AAAAGAAATT CTGAATTACT GACCGTAGAA
2101 TATGAAGAAT TTAACCATCA AGATTGGGAA GGAAATTTAA AACTGAAAAT GTACAATTAT
2161 CACTTAGGCT ATCTCAAGAG AGATGATTTG CCTTCTCAAG GAAAATGGAG ACAGGCATAT
2221 TCATGGGTCA TCAAAATCCA GACATACAGT CAACACTGAG AATCAGCACA CACCATATTT
2281 CAAATATAGA AGAGTCATGT ACTTGCAAC CAGTAAATTC TGAAAAAAA GACACTTACT
2341 TATTATTAAA ACCCCAAATG CAATCAGCGA AACATATTTT TACTATTCTT GGATGATAGT
2401 CAAAATGATC ATAAGCCAGG TTTGCTTCCA CCTTCCCTGA AAATTTTACT CACAGATCAT
2461 TTGCAACAAG CATAGCTTAC TTATTGTTTA GGGACTGAAC AATTTATTGG GAAGCAAACCT
2521 CTTTATATGC TAGAAAGTAC ATTTAAAAGA TGACTACTTA CGCAGGGAGA TGCAGGTCTC
2581 TCTAAACGCA TGAATGTATG TAGTGTGTAG GCACTGTAGT GAGTGTATAT ATGCTCCACA
2641 CTACGTCTGA TAAACACAAA CCTCAGTATT CAGTTATTAG GCACACTAGT TTTATACGCA
2701 ACTACTGCTT ACATAGTAGA CTGTTTTGTT GCCAATAATC TTTGAATTGT TCTTTAAAAG
2761 AAAGTGAGGT TCAGATACAC ATACCATGGA AAAATCTTAC TTTCTTGTT ACTACACAAA
2821 GCTATTTTAA AGAAGATGCT ATGTTGGGAG AAGGGCGAAG TTGTACTATA TGACATAATC
2881 AATCCGGAAT TCCGCCGATA CTGACGGGCT CCAGGAGTCG TCGCCACCAA TCCCCATATG
2941 GAAACCGTCG ATATTCAGCC AAAGCC

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Figure 18 (SEQ ID NO: 71)
Isoform #1, Human IPM200

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1  AAATTAACAC CCTCATAAAG GTAAACCAAG AAGGTTATCC TCAATCATCT GGTATCAATA
61 TATAATTATT TTTCACATTT CTGTTACTTT TTAATGAGAT TTGAGGTTGT CTGTGATTGT
121 TATCAGAATT ACCAATGCAC AAAAGCCAGA ATGTATTTGG AAAC TAGAAG AGCTATTTTT
181 GTTTTTTGGA TTTTCTCCA AGTTCAAGGA ACCAAAGATA TCTCCATTAA CATATACCAT
241 TCTGAAACTA AAGACATAGA CAATNCCCCA AGAAATGAAA CAACTGAAAG TACTGAAAAA
301 ATGTACAAAA TGTCAACTAT GAGACGAATA TTCGATTTGG CAAAGNATCG AACAAAAAGA
361 TCCGCATTTT TCCCAACGGG GGTAAAGTC TGTCCACAGG AATCCATGAA ACAGATTTTA
421 GACAGTCTTC AAGCTTATTA TAGATTGAGA GTGTGTCAGG AAGCAGCATG GGAAGCATAT
481 CGGATCTTTC TGGATCGCAT CCCTGACACA GGGGAATATC AGGACTGGGT CAGCATCTGC
541 CAGCAGGAGA CCTTCTGCCT CTTTGACATT GGAAAAAATC TCAGCAATTC CCAGGAGCAC
601 CTGGATCTTC TCCAGCAGAG AATAAACAG AGAAGTTTCC CTGACAGAAA AGATGAAATA
661 TCTGCAGAGA AGACATTGGG AGAGCCTGGT GAAACCATTG TCATTTCAAC AGCAATCTAC
721 ATTTCAAAGA CTGGGGCAGT ATTCTAAGAA AACCCTCAGA AGAGCAAATT CAAGATGTTG
781 CCAACGTCTC ACTTGGGCCT TTCCCTCTCA CTCTGATGA CACCCTCCTC AATGGAATG
841 TCGATAATAC ACTCAACGAC ACCAAGATGC CTACAACAGA AAGAGAAACA GAATTCGCTG
901 TGTTGGAGGA GCAGAGGGTG GAGCTCAGCG TCTCTCTGGT AAACCAGAAG TTCAAGGCAG
961 AGCTCGCTGA CTCCCAGTCC CCATATTACC AGGAGCTAGC AGGAAAGTCC CAACTTCAGA
1021 TGCAAAAAGAT ATTTAAGAAA CTTCCAGGAT TCAAAAAAAT CCATGTGTTA GGATTTAGAC
1081 CAAAGAAAGA AAAAGATGGC TCAAGCTCCA CAGAGATGCA ACTTACGGCC ATCTTTAAGA
1141 GACACAGTGC AGAAGCAAAA AGCCCTGCAA GTGACCTCCT GTCTTTTGAT TCCAACAAAA
1201 TTGAAAGTGA GGAAGTCTAT CATGGAACCA TGGAGGAGGA CAAGCAACCA GAAATCTATC
1261 TCACAGCTAC AGACCTCAA AGGCTGATCA GCAAAGCACT AGAGGAAGAA CAATCTTTGG
1321 ATGTGGGGAC AATTCAGTTC ACTGATGAAA TTGCTGGATC ACTGCCAGCC TTTGGTCTTG
1381 ACACCCAATC AGAGCTGCCC ACATCTTTTG CTGTTATAAC AGAGGATGCT ACTTTGAGTC
1441 CAGAACTTCC TCCTGTTGAA CCCCAGCTTG AGACAGTGGA CGGAGCAGAG CATGGTCTAC
1501 CTGACACTTC TTGGTCTCCA CCTGCTATGG CCTACCTCC CTGTCAGAAG CTCCACCTTT
1561 CTTTATGGCA TCAAGCATCT TCTCTCTGAC TGATCAAGGC ACCACAGATA CAATGGCCAC
1621 TGACCAGACA ATGCTAGTAC CAGGGCTCAC CATCCCCACC AGTGATTATT CTGCAATCAG
1681 CCAACTGGCT CTGGGAATTT CACATCCACC TGCATCTTCA GATGACAGCC GATCAAGTGC
1741 AGGTGGCGAA GGTATGGACA GAGACCTAGA TGAAATGGAT CTGTCTGACA CTCCTGCCCC
1801 ATCTGAGGTA CCAGAGCTCA GCGAATATGT TTCTGTCCCA GATCATTTCT TGGAGGATAC
1861 CACTCCTGTC TCAGCTTTAC AGTATATCAC CACTAGTTCT ATGACCATTG CCCCCAAGGG
1921 CCGAGAGCTG GTAGTGTCTC TCAGTCTGCG TGTGCTAAC ATGGCCTTCT CCAACGACCT
1981 GTTCAACAAG AGCTATTTGG AGTACCGAGC TCTGGAGCAA CAATTCACAC AGCTGCTGGT
2041 TCCATATCTA CGATCCAATC TTACAGGATT TAAGCAACTT GAAATACTTA ACTTCAGAAA
2101 CGGGAGTGTG ATTTGTGAATA GCAAAATGAA GTTTGCTAAG TCAGTGCCGT ATAACCTCAC
2161 CAAGGCTGTG CACGGGGTCT TGGAGGATTT TCGTTCTGCT GCAGCCCAAC AACTCCATCT
2221 GGAAATAGAC AGCTACTCTC TCCC

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Figure 19 (SEQ ID NO: 72)
Isoform #2, human IPM200

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14 IFLOVQGT.KDISINIIHSETKDIDNP.....PRNETTESTEKMYKMSTMRIIDLAKH...RTKRSAPFPTGVKVCPOESMKQILDSIQAYYRLRV 101
16 IFVLIEGDFPSLTATYLS.IEEIQEPKSAVSPLLPEESTDLSLATKKKQPLDRR..ETERQWLIRRRRSILPPNGVKICPDSEVAEAVANHVKYKVRV 112
102 CQEAWEAYRIFLDRIPTGEYQDWVSICQOETFCFLDIGNFNSQEHLDLLQQRIRKQSFPPDRKDEISAETLGEF...GETIVISTDVANVSLGPPP 198
113 CQEAWEAFRTFMDRLPGREEYHYWMNLCEDGVTSIFEMGTNFSSESVEHRSIMKKLTY....AKETVSSSE.LSSPVFVGDTSTLGDTTLSV...PHP 203
199 LT.....PDDTLNEILDNTLNDTKMPTTERETEPFAVLEEQRVLSVSLVNQKPKAELADSOQSPYYQELAGKSQLMQKIFKKLPGFKKIHV 285
204 EVDAYEGASESSLERPEESISNEI.ENVIEEATKPAGEQIAEF.....SIHLLGKQYREELQDSSSFHHQHLEEFISEVENAFTGLPGYKEIRV 292
286 LGFRPKKEKDGSSSTEMQLTAIFKRHSAAKSPAS.DLLSPDSNKIESEEVYHGTMEEDKQPEIYLTATDLKRLISKALEE..... 365
293 LEFRSPKEND..SGVDVYYAVTF...NGEAIISNTTWLISLHNSKVEN...HGLVELDDKPTVVYTIISNFRDYIAETLQONFLLGNSSLNPPDPSLQLI 383
366 .....EQSLDV.....GTIQFT.....DE.IAGSLP.....AFGPDTQSELPTSPAVITEDATL.....SPE..... 411
384 NVRGVLRHQEDLVWNTQSSSLQATPSSILDNTPOAAWPSADESITSSIPPLDFSSGPPSATGRELWSESPLGDLVSTHKLAPPSKMLGSSSPEVLEVSS 483
412 .....LPP.....VEPQLETVDGAE...HGLPDTSWSPAMAST.....SLSEAPPPFMASSI.F...SLT....DQGT 464
484 LTLHSVTPAVLQGLPVASEERTSGSHLVEDGLANVEESEDFLSIDSLPSSSFTQVPVKETIPSMEDSDVSLTSSP...YLTSSIPFGLDLSLTKVKDQLK 581
465 TDTMATDQTM.....LVPG.....LTIPTSDYSAISQLALGISHP.....PA.....SSD.....DSRSSAGGED. 514
582 VSPFLPDASMEKELIFDGGGSGSGQKVDLITWPWSETSS.EKSAEPLSKPWLEDDDSLLPAEIEDKKLVLDKMDSTDQISKHSKYEHDDRSTHPPEE 680
515 .....MVRHLDEN...DLSDTAP.....SEVPELSEY.....VSV..PD..... 544
681 PLSGPAVIPADTAESASLTLPKHISEVPGVDDCSVTKAPLILTSVAISASTDKSDQADAILREDMEQITESSNYEWFDSVSMVKPDMQTLWTILPES 780
545 .....HFLE....D...TTPVSA.....LQ.....YI.....TTSSMTI 566
781 ERVWTRTSSLEKLSRDILASTPQSADRLNLSVTQSTKLPTTISTLLEDEVIMGVQDISLELDRIQTDYYQPEQVQEQNGKVGSYVEMSTSVHSTEMVSV 880
567 A.P.KGRE.....LVVFFSLRVANMAFNSDLFNKSSLEYRALEQQFTQLLVPLYRLSNLTGFKQLEILNFRNGSVIVNSKMKPAKSVPPNLTKAHV 654
881 AWPTEGGDDLSYQTSGALVVFFSLRVNMMFSEDLFNKNLSLEYKALEQRFLELLVPLYQSNLTGPNLEILNFRNGSVIVNSRMKFANSVPPNPNNAVY 980
655 GULEDFRSAAAQQLHLEIDSYSNLNIEPADQADPCKFLACGEFAQCCKVNERTEEAECRCCKPGYDSQGSGLDGLPEGLCGPGTKE.....CEVLQKGAPCR 748
981 MILEDFTCTAYNTMNLAIKYSYLDVESGDEANPCKFQACNEFSECLVNPWSGEAKCRCFPGLYSVEERPCQS..LCDLQPDFCLNDGKCDIMPGHGAICR 1078

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Fig. 20

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Figure 21A

Human IPM 150 - - V I R N S T V E Y N H
 Isoform 1 - - V I R N S L L L T V E Y N H
 Isoform 2 - - V I R N S L L L T V E Y N H
 Mouse IPM 150 V K R N S L - - - A - I G E X

Figure 21B

IPM 200 protein sequences

Monkey IPM 200	10	20	30	40	50	60
Human IPM 200	10	20	30	40	50	60
Rat IPM 200	10	20	30	40	50	60
Mouse IPM 200	10	20	30	40	50	60
Monkey IPM 200	70	80	90	100	110	120
Human IPM 200	70	80	90	100	110	120
Rat IPM 200	70	80	90	100	110	120
Mouse IPM 200	70	80	90	100	110	120
Monkey IPM 200	130	140	150	160	170	180
Human IPM 200	130	140	150	160	170	180
Rat IPM 200	130	140	150	160	170	180
Mouse IPM 200	130	140	150	160	170	180
Monkey IPM 200	190	200	210	220	230	240
Human IPM 200	190	200	210	220	230	240
Rat IPM 200	190	200	210	220	230	240
Mouse IPM 200	190	200	210	220	230	240
Monkey IPM 200	250	260	270	280	290	300
Human IPM 200	250	260	270	280	290	300
Rat IPM 200	250	260	270	280	290	300
Mouse IPM 200	250	260	270	280	290	300
Monkey IPM 200	310	320	330	340	350	360
Human IPM 200	310	320	330	340	350	360
Rat IPM 200	310	320	330	340	350	360
Mouse IPM 200	310	320	330	340	350	360
Monkey IPM 200	370	380	390	400	410	420
Human IPM 200	370	380	390	400	410	420
Rat IPM 200	370	380	390	400	410	420
Mouse IPM 200	370	380	390	400	410	420
Monkey IPM 200	430	440	450	460	470	480
Human IPM 200	430	440	450	460	470	480
Rat IPM 200	430	440	450	460	470	480
Mouse IPM 200	430	440	450	460	470	480
Monkey IPM 200	490	500	510	520	530	540
Human IPM 200	490	500	510	520	530	540
Rat IPM 200	490	500	510	520	530	540
Mouse IPM 200	490	500	510	520	530	540
Monkey IPM 200	550	560	570	580	590	600
Human IPM 200	550	560	570	580	590	600
Rat IPM 200	550	560	570	580	590	600
Mouse IPM 200	550	560	570	580	590	600
Monkey IPM 200	610	620	630	640	650	660
Human IPM 200	610	620	630	640	650	660
Rat IPM 200	610	620	630	640	650	660
Mouse IPM 200	610	620	630	640	650	660
Monkey IPM 200	670	680	690	700	710	720
Human IPM 200	670	680	690	700	710	720
Rat IPM 200	670	680	690	700	710	720
Mouse IPM 200	670	680	690	700	710	720
Monkey IPM 200	730	740	750	760	770	780
Human IPM 200	730	740	750	760	770	780
Rat IPM 200	730	740	750	760	770	780
Mouse IPM 200	730	740	750	760	770	780

Figure 22A

1270	1280	1290	1300	1310	1320
A A F A R E Q Q V E E V					
A A F A R E H E M E E L					
A A F A R E H O M E E L					

Figure 22 B